

**A.G &S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE VUYYURU, KRISHNA Dt. A.P.(Autonomous)**

Accredited by NAAC with “A” Grade



2020-2021

DEPARTMENT OF ZOOLOGY

MINUTES OF BOARD OF STUDIES

B.Sc. AQUACULTURE(Industrial Fisheries)

04-07-2020

ODD SEMESTER



meeting of Board of studies in Zoology for the Autonomous courses
of A.G.&S.G Siddhartha Degree College of Arts & Science, Vuyyuru, held at 11.00
AM on 04-07-2020 in the Department of Zoology.

Smt.D.A.

Presiding

KiranmayeeMembers

Presente

1) *B. Aruna Kiranmayee* Chair person

Head, Department of Zoology,
A.G&S.G.S Degree College of
Vuyyuru-521165.

(Smt. D.A.Kiranmayee.)

2) *J. Navene Latha* University Nominee
(Dr.J.N.Lavanya Latha.) 4/7/2020

Krishna
University,
Machilipatnam.

3)
(Dr.K.Daniel)

Academic Council
Nominee

Head, Dept.of Zoology,
JKC College, Guntur.

4)
(B.Elia)

Academic Council
Nominee

Head, Dept.of Zoology,
Govt.DegreeCollege,
Pitapuram.

5) *M. Lakshmi Priyanka*
(kum.M.Lakshmi Priyanka.)

Member

A.G&S.G.S Degree College
Vuyyuru-521165.

6) *B. Appala Naidu*
ProjectManager.
(B.Appala Naidu)

Industrialist Asst.

RGCA

7) *Ch. Chiranjeevi*
(Ch.Chiranjeevi.)

Student Represent P.hd –Research Scholar,
Dept.of Botany& Microbiology.

Acharya Nagarjuna University,
Guntur.

Minutes of the meeting of Board of studies in Zoology for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 11.00 AM on 04-07-2020 in the Department of Zoology.

Smt.D.A. Kiranmayee. ... Presiding

Members Present:

- 1) Chair person . Head, Department of Zoology,
A.G&S.G.S Degree College of Vuyyuru-521165.
(Smt. D.A.Kiranmayee.)
- 2)..... University Nominee Dr. J.N.Lavanya Latha,
(Dr.J.N.Lavanya Latha.)Krishna University,
Machilipatnam.
- 3)..... Academic Council Head, Department of Zoology,
(Dr. K.Daniel.) Nominee JKC College,
Guntur,
- 4)..... Academic Council Head, Department of Zoology,
(B.Elina.) Nominee Gov. Degree College,
Pitapuram.
- 5)..... Member Lecturer in Zoology,
(kum.M.Lakshmi Priyanka.) A.G&S.G.S Degree College
Vuyyuru-521165.
- 6)..... Industrialist Asst. Project Manager,
(B. Appala Naidu.) RGCA
Manikonda.
- 7)..... Student Represent P.hd –Research Scholar,
(Ch.Chiranjeevi.) Dept.of Botany & Microbiology,
Acharya Nagarjuna University,
Guntur.

Minutes of the meeting of Board of studies in Zoology for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 11.00 AM on 04-07-2020 in the Department of Zoology.

Smt.D.A. Kiranmayee. ... Presiding

Members Present:

- 1) Chair person Head, Department of Zoology,
A.G.&S.G.S Degree College of Vuyyuru-521165.
(Smt. D.A.Kiranmayee.)
- 2)..... University Nominee Dr. J.N.Lavanya Latha,
(Dr.J.N.Lavanya Latha.)Krishna University, Machilipatnam.
- 3)..... Academic Council Head, Department of Zoology,
(Dr. K.Daniel.) Nominee JKC College, Guntur,
- 4)..... Academic Council Head, Department of Zoology,
(Dr. B.Elia.) Nominee Gov. Degree College,
Pitapuram.
- 5)..... Member Lecturer in Zoology,
(kum.M.Lakshmi Priyanka.) A.G.&S.G.S Degree College
Vuyyuru-521165.
- 6)..... Industrialist Asst. Project Manager,
(B. Appala Naidu.) RGCA
Manikonda.
- 7)..... Student Represent P.hd –Research Scholar,
(Ch.Chiranjeevi.) Dept.of Botany & Microbiology,
Acharya Nagarjuna University,
Guntur.

Agenda for B.O.S Meeting.

1. To recommend the syllabi (Theory & Practical), Model question paper for I& II Semester of I
B.Sc (A.B.C) for the academic year 2020-2021.
2. To recommend the syllabi (Theory & Practical), Model question paper for III Semester of II
B.Sc (A.B.C) for the academic year 2020-2021.
3. To recommend the syllabi (Theory & Practical), Model question paper and Blue print of I&III semester of I, II B.Sc (A.B.C.) for the academic year 2020-2021.
4. To recommend the syllabi of Competitive Zoology as Unit- VI in I, III Semesters for the Academic year 2020-2021.
5. To recommend the teaching and evolution methods to be followed under Autonomous statues.
6. Any other matter.

B. A. Chinnappa

Chairman.

RESOLUTIONS

1. It is resolved to continue the same syllabi (Theory & Practical), model question paper of I & II Semester of I B.Sc. (A.B.C) under Choice Based Credit System (CBCS) for the academic Year 2020 – 2021.

2. It is resolved to continue the newly framed syllabi (Theory & Practical), model question paper of III Semester of II B.Sc. (A.B.C) under Choice Based Credit System (CBCS) for the academic Year 2020 – 2021.

3. It is resolved to follow the Model question paper and Blue print of I&III semester of I, II B.Sc (A.B.C.) for the academic year 2020-2021.

4. It is resolved to continue the following teaching & evaluation methods for the Academic year 2020-21.

Teaching methods:

Besides the conventional methods of teaching, we use modern technology i.e. Using of OHP and LCD projector to display on U boards etc; for better understanding of concepts.

Evaluation of a student is done by the following procedure:

- **Internal Assessment Examination:**
- Out of maximum 100 marks in each paper for I, II B.Sc(A.B.C) 30 marks shall be allocated for internal assessment.
- Out of these 30 marks, 20 marks are allocated for announced tests (i.e . IA-1& IA-2). Two announced tests will be conducted and average of these two tests shall be deemed as the marks obtained by the student, 5 marks are allocated on the basis of candidate's percentage of attendance and remaining 5 marks are allocated for the assignment for I, II B.Sc (A.B.C).
- **Semester – End Examination:**
- The maximum mark for I, III (A.B.C) semester – End examination shall be 70 marks and duration of the examination shall be 3 hours. Even though the candidate is absent for two IA exams/ obtain Zero marks the external marks are considered (if the candidate gets 40/70) and the result shall be declared as “PASS”.
- Semester – End examination shall be conducted in theory papers at the end of every semester, while in practical papers, these examinations are conducted at the end of II semester for I B.Sc. (A.B.C).

B. A. Chinnmayee

Chairman

Adusumilli Gopalakrishnaiah & Sugar Cane Growers Siddhartha Degree College Of Arts & Science, Vuyuru-521165, Krishna Dt. ,A.P. (Autonomous).

Aquaculture

Semester – I

Class: I B.Sc. (ABC)

PAPER-I

w.e.f. 2019-2020

Credits : 3

(Code: Aqu-101C)

Title of the paper: . Basic principles of aquaculture.

60 hrs.(4hrs/week)

Max.Marks : 70

Objective of the course: To introduce the basic principles of Aquaculture (Industrial fishers).

Understand

the nature and basic concept of aquaculture.

Course outcomes:

- 1.Learn about the concept of Blue Revolution, Types of Aquaculture systems and scope of Aquaculture at global ,India and Andhra level.
2. Understand the concepts of Ecology, and Nutrient cycles in culture ponds.
3. Acquire knowledge of different types of ponds and their functional classification.
4. Understand the important factors involved in construction of ideal fish pond.
5. Acquire knowledge of pond management factors, eradication of predators and weed control, physico-chemical Conditions to be maintained.

UNIT- I: Introduction

10hrs.

- 1.1: Concept of Blue Revolution - History and definition of Aquaculture.
- 1.2: Scope of Aquaculture at globalLevel, India and Andhra Pradesh.
- 1.3: Fresh water aquaculture, brackish water aquaculture andmariculture
- 1.4: Different Aquaculture systems – Pond, Cage, Pen, Running water, Extensive, Intensive and & Semi- Intensive Systems and their significance. Monoculture, Polyculture and Monosex culturesystems
- 1.5: Aquaculture versus Agriculture; Present day needs with special reference to AndhraPradesh

UNIT-II : Pond Ecosystem

15hrs.

- 2.1 General Concepts of Ecology, Carrying Capacity and Food Chains
- 2.2: Lotic and lentic systems, streams andsprings
- 2.3: Nutrient Cycles in Culture Ponds – Phosphorus, Carbon andNitrogen
- 2.4. Importance of Plankton and Benthos in culture ponds, nutrient dynamics and algal blooms
- 2.5 Concepts of Productivity, estimation and improvement o fproductivity

UNIT-III: Types of fish pods

10hr

- 3.1 Classification of ponds based on water resources – spring, rain water, flood water, well water and water course ponds
- 3.2: Functional classification of ponds– head pond, hatchery, nursery, rearing, production, stocking andquarantine ponds
- 3.3: Hatcherydesign

UNIT-IV : pond preparation

15hrs.

- 4.1 Important factors in the construction of an ideal fish pond – site selection, topography, nature of the soil, water resource
- 4.2. Lay out and arrangements of ponds in a fishfarm
- 4.3 . Construction of an ideal fish pond – space allocation, structure and components of barragepond

UNIT- V :Pond management factor

10hrs

- 5.1: Need of fertilizer and manure application in culture ponds; Role of nutrients; NPKcontents of different fertilizers and manures used in aquaculture; and precautions in theirapplication.
- 5.2. Physico-chemical conditions of soil and water optimum for culture–temperature, depth, turbidity, light, water and shore currents, PH, DOD, CO2 and nutrients; measures to increase oxygen and reduce ammonia & hydrogen sulphide in culture ponds; correction ofPH.
- 5.3 Eradication of predators and weed control – advantages and disadvantages of weed, weed plants in culture ponds, aquatic weeds, weed fish, toxins used for weed control and control of predators

UNIT- VI – Competitive Aquaculture 6.1. Fish Biology,6.2. Biology of Indian major carps.

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521165, Krishna Dt. A.P. (Autonomous)**

Semester – I

Model Question Paper

w.e.f. 2019-2020

Title of the paper:
101C

Basic principles of aquaculture .

Code – AQU-

Time: 3hrs.

Max.marks: 70

Section – A

4 x 5= 20.

Answer any **four** questions. Each question carries **five** marks. Draw neat labeled diagrams wherever necessary.

1. What is Aquaculture? Write the scope of aquaculture in India.
2. Polyculture.
3. Write about Food Chains.
4. Flood water.
5. Write about Nursery and Stocking ponds.
6. Site selection.
7. Draw diagram of Barrage pond and write its importance.
8. Toxins used for Weed control.

Section – B

5 x 10 =50.

Answer any **five** questions. Each question carries **Ten** marks. Draw neat labeled diagrams wherever necessary.

11. Write different types of Aquaculture Systems.
12. Define Mari culture and explain about it.
13. Write about Nutrient cycles in culture Ponds
14. Explain Concepts and improvement of productivity.
15. Explain Hatchery design with the help of diagrams.
16. Write about important factors in the construction of an ideal fish Pond
17. Physico-chemical conditions of soil and water optimum for Culture pond
18. Explain advantages and disadvantages of Weeds in Culture ponds

**A.G. & S.G.Siddhartha Degree College of Arts & Science, Vuyyuru –
521165, Krishna Dt. A.P. (Autonomous)**

Semester - I

Guide lines to the Paper Setter

W.e.f. 2019-2020

Title of the paper: Basic principles of aquaculture

Code – AQU-101C

**Time: 3hrs.
70.**

Max. Marks:

1. Answer any **four** questions out of eight in Section – A. Each question carries **five** marks. 4x5 = 20M.

2.. Answer any **five** questions out of eight in Section – B. Each question carries **Ten** marks. 5x10= 50M.

		UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Section					
5 Marks Questions	A	2	1	2	2	1
10 Marks Questions	B	2	2	1	1	2
Weightage		30	25	20	20	25

- Note:**
1. please provide the scheme of valuation for the paper.
 2. Question paper should be both in English and Telugu media.

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE,
VUYYURU-521165, KRISHNA Dt.,A.P. (AUTONOMOUS)**

AQUACULTURE (Industrial Fishers)

PRACTICAL - I

w.e.f.2019-20

2019-2020.

Code :AQU- 101P

MAX.MARKS : 50.

(2hrs/week)

[PRACTICALS]

- 1.Estimation of Carbonates, Bicarbonates in watersamples.
- 2.Estimation of Chlorides in watersamples.
- 3.Estimation of dissolvedoxygen.
- 4.Estimation of ammonia inwater.
- 5.Field visit to nursery, rearing and stocking ponds of aquafarms.
- 6.Field visit tohatchery.
- 7.Study of algal blooms and theircontrol.
- 8.Collection & identification of zooplankton andphytoplankton.
- 9.Determination of soil nitrogen and phosphorus.
10. Collection and study of aquaticweeds.
- 11.Filed survey of nearby habitat for dietary dependency on and requirement of aqua-products.

PRESCRIBED BOOK(S):Jhingran VG 1998. Fish and Fisheries of India. Hindusthan Publishing Corporation, New Delhi

Pillay TVR, 1996. Aquaculture Principles and Practices, Fishing News Books Ltd.,London

REFERENCES:

Pillay TVR & M.A.Dill, 1979. Advances in Aquaculture. Fishing News Books Ltd., London
1.16StickneyRR1979.PrinciplesofWarmWaterAquaculture.JohnWiley&SonsInc.1981

1.17Boyd CE 1982. Water Quality Management for Pond Fish Culture.

Elsivier Scientific Publishing Company. 1.18Bose AN et.al., 1991. Costal

Aquaculture Engineering. Oxford & IBH Publishing Company Pvt.Ltd.

**A. G.& S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE,
VUYYURU-521165**

EXTERNAL PRACTICAL- I

w.e.f. 2019-2020.

(Practical-1)

MODEL QUESTION PAPER –I

Code: AQU-101P

**Time: 3 hrs.
Max.marks: 25m.**

I.Estimation of dissolved oxygen.	6M.
II. Study of algal blooms and their control	4M.
III.: Identify, draw labeled diagram & write notes on A, B, C, D	4X3=12M
1. Viva.	3M
TOTAL:	25M.

Guide lines for the practical Examiners

I: Estimation of dissolvedoxygen.(5marks notes &1 mark for result.)

II : Study of algal blooms and their control. (3 marks notes, labeled diagram 1 marks)

III :1Mark for identification, 1 Mark for labeled diagram & 3Mark for notes for each question.

4 specimens / slides / models.

**A. G.& S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE,
VUYYURU-521165**

INTERNAL PRACTICAL- I

(2 hrs/week).

(Practical -I)Code: AQU-101P.

MODEL QUESTION PAPER -I

Max.marks:25M.

Time: 3hrs.

1. Attendance	-----	05M.
2. Record	-----	10M.
3. Field note book.	-----	05M
4. Assignment	-----	05M.
Total -----		25M.

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Aquaculture

Class: II B.Sc .(ABC)

Semester – III

PAPER-III

w.e.f. 2020-2021

Credits : 3

(Code: Aqu-301C)

Title of the paper: Fish nutrition & Feed technology

60 hrs.(4hrs/week)

Max.Marks : 70

UNIT-I: Nutritional requirements of cultivable fish

- 1.1 Requirements for energy, proteins, carbohydrates, lipids, fiber, micronutrients for different stages of cultivable fish and prawns
- 1-2 Essential amino acids and fatty acids, protein to energy ratio, nutrient interactions and protein sparing effect
- 1-3 Dietary sources of energy, effect of ration on growth, determination of feeding rate, check tray
- 1-4 factors affecting energy partitioning and feeding

UNIT-II: Forms of feeds & Feeding methods

- 2-1 Fed conversion efficiency, feed conversion ratio and protein efficiency ratio
- 2-2 Wet feeds, moist feeds, dry feeds, mashes, pelleted feeds, floating and sinking pellets, advantages of pelletization
- 2-3 Manual feeding, demand feeders, automatic feeders, surface spraying, bag feeding and tray feeding
- 2-4 Frequency of feeding

UNIT-III: Feed manufacture & Storage

- 3-1 Feed ingredients and their selection, nutrient composition and nutrient availability of feed ingredients
- 3-2 Feed formulation – extrusion processing and steam pelleting, grinding, mixing and drying, pelletization, and packing
- 3-3 Water stability of feeds, farm made aqua feeds, micro-coated feeds, micro-encapsulated feeds and micro- bound diets
- 3-4 Microbial, insect and rodent damage of feed, chemical spoilage during storage period and proper storage methods.

UNIT-IV: Feed additives & Non-nutrient ingredients

- 4-1 Binders, anti-oxidants, probiotics
- 4-2 Feed attractants and feed stimulants
- 4-3 Enzymes, hormones, growth promoters and pigments
- 4-4 Anti-metabolites, aflatoxins and fiber .

UNIT-V: Nutritional Deficiency in Cultivable fish

- 5-1 Protein deficiency, vitamin and mineral deficiency symptoms
- 5-2 Nutritional pathology and ant-nutrients
- 5-3 Importance of natural and supplementary feeds, balanced diet.

A.G. & S.G.Siddhartha Degree College of Arts & Science, Vuyyuru – 521165,
Krishna Dt. A.P. (Autonomous)

Semester –III

w.e.f. 2020-2021

Title of the paper: **Fish nutrition & Feed technology**

Time: 3hrs.

Code – AQU-301C

Max.marks: 70

Section – A

4 x 5= 20.

Answer any **four** questions. Each question carries **five** marks. Draw neat labeled diagrams wherever necessary.

1. writethe about protein to energy ratio?
2. Dry feeds.
3. Surface spraying
4. Insect and rodent damage of feed.
5. Nutrient composition
6. What is probiotics .
7. Growth pigments.
8. Vitamin deficiency symptoms.

Section – B

5 x 10 =50.

Answer any **five** questions. Each question carries **Ten** marks. Draw neat labeled diagrams wherever necessary.

9. Write an essay on any two Nutritional Requirements for cultivable fish ?
10. Explaintheeffect of ration on growth?
11. Explain about Frequency of feeding?
12. Describe the Feed formulation?
13. Explain the Feed attractants and feed stimulants?
14. Write anessay on **Feed additive**hormones?
15. Explain about Nutritional pathology?
16. Importance of natural and supplementary feeds

**A.G. & S.G. Siddhartha Degree College of Arts & Science, Vuyyuru – 521165,
Krishna Dt. A.P. (Autonomous)
Semester - III**

Guide lines to the Paper Setter.

W.e.f. 2020-2021

Title of the paper Fish nutrition & Feed technology:

Code – AQU-301C

Time: 3hrs.

Max. Marks: 70.

1. Answer any **four** questions out of eight in Section – A.
Each question carries **five** marks. $4 \times 5 = 20M$.
2. Answer any **five** questions out of eight in Section – B.
Each question carries **Ten** marks. $5 \times 10 = 50M$.

	Section	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
5 Marks Questions	A	1	2	2	2	1
10 Marks Questions	B	2	1	1	2	2
Weightage		25	20	20	30	25

Note: 1. please provide the scheme of valuation for the paper.

2. Question paper should be in English medium.

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYURU-
521165, KRISHNA Dt.,A.P. (AUTONOMOUS)

AQUACULTURE
PRACTICAL - III

w.e.f. 2020-2021.
MAX.MARKS : 50.
(2hrs/week)

Code :AQU- 301P

PRACTICAL SYLLABUS

1. Estimation of protein content in aquaculture feeds
2. Estimation of carbohydrate content in aquaculture feeds
- 3 Estimation of lipid content in aquaculture feeds
4. Estimation of ash in aquaculture feed
5. Study of water stability of pellet feeds
6. Feed formulation and preparation in the lab
7. Study of binders used in aquaculture feeds
8. Study of feed packing materials
9. Study of physical and chemical change during storage
- 10.Study on physical characteristics of floating and sinking feeds
- 11.Visit to a aqua-feed production unit

PRESCRIBED BOOK(S):

- 1.HALVER JE 1989. Fish nutrition. Academic press, San diego

REFERENCES:

- 1.1 Lovell rt 1998. Nutrition and feeding of fishes, Chapman & Hall, New York
- 1.2 Sena de silva, trevor a anderson 1995. Fish nutrition in aquaculture. Chapman & Hall, New York.

**A. G.& S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE,
VUYYURU-521165**

EXTERNAL PRACTICAL- III

**w.e.f. 2020-2021.
(2hrs/week)
Code: AQU-301P**

MODEL QUESTION PAPER –III

Time: 3 hrs.

Max.marks: 25m.

I. Estimation of carbohydrate content in aquaculture feeds	7M.
II. Estimation of ash in aquaculture feed	5M.
III. Study of feed packing materials	5M
IV. Study of physical and chemical change during storage	5M
V. Viva.	3M
TOTAL: -----	25M.

Guide lines for the practical Examiners

I: Estimation of carbohydrate content in aquaculture feeds (5 marks notes & Result 2 mark .)

II : Estimation of ash in aquaculture feed (5 marks notes)

III :Study of feed packing materials (5 marks notes)

IV. Study of physical and chemical change during storage(5 marks notes)

**A. G.& S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE,
VUYYURU-521165**

INTERNAL PRACTICAL- III

**w.e.f. 2020-2021.
(2 hrs/week).**

(Practical -III)Code: AQU-301P.

MODEL QUESTION PAPER -III

Max.marks:25M.

Time: 3hrs.

1. Attendance	----- 05M.
2. Record	-----10M.
3. Field trip	----- 05M
4. Assignment	----- 05M.

Total ----- 25M.

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF BOTANY

MINUTES OF BOARD OF STUDIES

ODD SEMESTER

16-07-2020

Minutes of the meeting of Board of studies in Botany for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 10:30 A.M on 16-07-2020 through Online.

Members Present:-

- 1) CH. Beulah Ranjani
(CH. Beulah Ranjani) Chairman Head, Department of Botany,
A.G & S.G.S Degree College of Arts
& Science (Autonomous), Vuyyuru.
- 2) G. Ramesh
(Dr. G.Ramesh) University Nominee Head, Department of Botany,
K.B.N.College, Vijayawada.
- 3) A. Srinivasa Rao
(Dr.A.Srinivasa Rao) Academic Council Nominee Lecturer in Botany,
Govt.Degree College Mandapeta,
East Godavari.
- 4) N. Manimala
(N.Manimala) Academic Council Nominee Head, Department of Botany,
Govt.Degree College, Chintalapudi.
- 5) S. Krishna Suman
(S.Krishna Suman) Industrialist Natural Farming,
Yakamuru, Vuyyuru, Krishna Dt.
- 6) N. Ramana Rao
(N.Ramana Rao) Member Adhoc Lecturer in Botany,
A.G & S.G.S Degree College of Arts
& Science (Autonomous), Vuyyuru.
- 7) E. Ganesh
(E.Ganesh) Member Adhoc Lecturer in Botany,
A.G & S.G.S Degree College of Arts
& Science (Autonomous), Vuyyuru.
- 8) K. Anusha
(K.Anusha) Student Representative Lecturer, Chaitanya College,
Vuyyuru.

Agenda for B.O.S Meeting.

1. To recommend the syllabi (Theory & Practical), Model question paper for I Semester of I B.Sc (B.Z.C), (A.B.C) for the academic year 2020 - 2021.
2. To recommend the syllabi (Theory & Practical), Model question paper for III Semester of II B.Sc (B.Z.C), (A.B.C) for the academic year 2020 - 2021.
3. To recommend the syllabi (Theory & Practical), Model question paper for V Semester of III B.Sc (B.Z.C), (A.B.C) for the academic year 2020 - 2021.
4. To recommend the syllabi (Theory & Practical), Model question paper and Blue print of I, III & V semester of I, II & III B.Sc (B.Z.C), (A.B.C.) for the academic year 2020 - 2021.
5. To recommend the syllabi of Competitive Botany as Unit- VI in I, III Semesters for the Academic year 2020 - 2021.
6. To recommend the teaching and evolution methods to be followed under Autonomous statues.
7. Any other matter.

C. B. Rajani
Chairman.

Resolutions:

1. It is resolved to implement the changed syllabi (Theory & Practical), model question paper & guide lines to be followed by the question paper setters of Botany of I semesters of I B.Sc (B.Z.C) and I B.Sc. Aquaculture under Choice Based Credit System (CBCS) for the academic year 2020-21.

2. It is resolved to implement the same syllabi (Theory & Practical), model question paper & guide lines to be followed by the question papers setters under Choice Based Credit System (CBCS) of III semester of II B.Sc. (B.Z.C) as approved by the Academic Council of 2019-20.

3. It is resolved to implement the same syllabi & model papers under Choice Based Credit System (CBCS) for semester V of III B.Sc. (B.Z.C) as approved by the Academic Council of 2019-20. It is resolved to implement Plant Nursery as SDC with course Code PNT-501 for V semester students.

4. It is resolved to continue the same Blue prints of I, III and V Semesters of B. Sc Botany for the Academic year 2020-21.

6. It is resolved to implement certificate course on for II Year students.

7. It is resolved to continue the following teaching and evaluation methods for the Academic year 2020-21

Teaching and Evaluation methods:

Internal Assessment

- Out of the maximum 100marks in each paper for I, II & III B. Sc. BZC and Aquaculture 30 marks shall be allocated for Internal Assessment.
- Out of these 30 marks, 20marks are allocated for announced tests (ie; IA-I & IA-II). Two announced tests will be conducted and average of these two tests shall be deemed as the marks obtained by the students. 5 marks are allocated on candidate's percentage of attendance.

Semester End Examination:

- The maximum marks for I, III and V Semesters BZC and ABC Semester End examination shall be 70marks and duration of the examination is 3 hours. Even though the candidate is absent for both two IA exams/obtain Zero marks the external marks are considered if the candidate gets 40 out of 70 and the result shall be declared as PASS.
- Semester End Examination shall be conducted in theory and practical papers at the end of every semester of I, III, & V Semesters of I, II & III B. Sc. BZC and Aquaculture.
- Discussed and recommended for organising seminars, guest lectures, work-shops to upgrade the knowledge of students for the approval of the Academic council.

C. B. Raghav

Chairman

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BOTANY	BOT - 101C	w.e.f. 2020-21	B. Sc. (BZC)
SEMESTER - I	Fundamentals of Microbes and Non-vascular Plants		PAPER - I
(Viruses, Bacteria, Fungi, Lichens, Algae and Bryophytes)			

Unit – 1: Origin of life and Viruses **12Hrs.**

1. Origin of life, five kingdom classification of R.H. Whittaker
2. Discovery of microorganisms, Pasteur experiments, germ theory of diseases.
3. Shape and symmetry of viruses; structure of TMV and multiplication of TMV; A brief account of Prions and Viroids.
4. A general account on symptoms of plant diseases caused by Viruses. Transmission of plant viruses and their control.

Unit – 2: Special groups of Bacteria and Eubacteria **12Hrs.**

1. Brief account of Archaeobacteria, Actinomycetes and Cyanobacteria.
2. Cell structure and nutrition of Eubacteria.
3. Reproduction- Asexual (Binary fission and endospores) and bacterial recombination (Conjugation, Transformation, Transduction).
4. Economic importance of Bacteria with reference to their role in Agriculture and industry (fermentation and medicine).
5. A general account on symptoms of plant diseases caused by Bacteria; Citrus canker.

Unit – 3: Fungi & Lichens **12 Hrs.**

1. General characteristics of fungi and Ainsworth classification (upto classes).
2. Structure, reproduction and life history of (a) *Rhizopus* (Zygomycota) and (b) *Puccinia* (Basidiomycota).
3. Economic uses of fungi in food industry, pharmacy and agriculture.
4. A general account on symptoms of plant diseases caused by Fungi; Blast of Rice.
5. Lichens- structure and reproduction; ecological and economic importance.

Unit – 4: Algae **12 Hrs.**

1. General characteristics of Algae (pigments, flagella and reserve food material); Fritsch classification. (upto classes).
2. Thallus organization and life cycles in Algae.
3. Occurrence, structure, reproduction and life cycle of (a) *Spirogyra* (Chlorophyceae) and (b) *Oedogonoum* (chlorophyceae) .
4. Economic importance of Algae.

Unit – 5: Bryophytes **12 Hrs.**

1. General characteristics of Bryophytes; classification upto classes.
2. Occurrence, morphology, anatomy, reproduction (developmental details are not needed) and life cycle of (a) *Marchantia* (Hepaticopsida) and (b) *Funaria* (Bryopsida).
3. General account on evolution of sporophytes in Bryophyta.

BOTANY	BOT-301C	w.e.f. 2020-21	B. Sc. (BZC)
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II B. Sc - BOTANY

SEMESTER - III

PAPER – III

Plant Taxonomy and Plant Physiology

Hours: 60 @ 4 hrs per week

Credits: 3

UNIT – I: Introduction to Plant Taxonomy

(12 hrs)

1. Fundamental components of taxonomy (identification, nomenclature, classification types and phylogeny)
2. Salient features of Bentham & Hooker classification.
3. Role of chemotaxonomy, cytotoxicity and Embryology in relation to Taxonomy.
4. APG IV System of Classification – 2016.

UNIT –II: Systematic Taxonomy

(12 hrs)

1. Nomenclature and Taxonomic resources: An introduction to International Code of Botanical Nomenclature; Principles, Rules and Recommendations.
2. Systematic study and economic importance of plants belonging to the following families: Annonaceae, Capparidaceae, Rutaceae, Cucurbitaceae and Apiaceae

UNIT –III: Systematic Taxonomy

(12 hrs)

1. Systematic study and economic importance of plants belonging to the following families: Asteraceae, Asclepiadaceae, Lamiaceae, Euphorbiaceae, Orchidaceae and Poaceae.

Plant Physiology

UNIT – IV: Plant – Water relations

(12 hrs)

1. Importance of water to plant life, physical properties of water,
2. Diffusion, Imbibition and osmosis; water potential, osmotic potential and pressure potential.
3. Absorption, transport of water, ascent of sap.
4. Transpiration – types, stomata structure, movements and significance.

UNIT –V: Mineral nutrition, Fertilizers and Enzymes

(12 hrs)

1. Mineral Nutrition: Essential macro and micro mineral nutrients and their role, mineral uptake (active and passive), deficiency symptoms.
2. Nitrogen cycle- biological nitrogen fixation.
3. Enzymes: Nomenclature, characteristics, mechanism and regulation of enzyme action, enzyme kinetics, factors regulating enzyme action.

UNIT –VI (Competitive Syllabus)

1. Definitions of Growth and Classification Based on Growth Habits.
2. Fruitarianism – Introduction, Varieties, Nutrition and Nutritional effects Vitamin B12
3. Biological Nitrogen Fixation.

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BOTANY	BOT- 301C	w.e.f. 2020-21	B. Sc. (BZC)
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II B. Sc – BOTANY

Model Question Paper

SEMESTER- III

PAPER-III: Plant Taxonomy and Plant Physiology

Time: 3 Hours

Max. Marks: 70

SECTION-A

Answer any **four** of the following questions.

4x5 = 20Marks

(Draw diagrams wherever necessary)

1. Binomial nomenclature.
2. Cytotaxonomy.
3. Fruit in Rutaceae.
4. Pollination mechanism in Lamiaceae.
5. Water potential.
6. Types of Transpiration.
7. Imbibition.
8. Nitrogen.

SECTION-B

Answer any **five** of the following questions.

5x10 = 50Marks

(Draw diagrams wherever necessary)

9. Explain in brief Bentham & Hookers system of classification. Discuss the merits and demerits of the system.
10. Describe vegetative and floral characters of the family Cucurbitaceae.
11. Write an essay on ICBN.
12. Describe vegetative & floral characters of Asclepiadaceae.
13. Describe floral characters and economic importance of Euphorbiaceae.
14. Write an essay on Ascent of sap.
15. Write an essay on the absorption of mineral ions.
16. Explain the enzyme action and add a note on the factors that effect enzyme activity.

Guide lines for paper setter: (for Paper III – BOT- 301) w.e.f 2020-21

1. In **section A**: Unit II, III & V must carry **one** question from each Unit, Unit I must carry

- two** questions and Unit IV must carry **three** questions.
- In **section- B**: Set minimum **two** questions from Unit II, III & V. **One** question each from Unit I and Unit IV.
 - See the following table and Model paper for marks distribution.
 - Please provide the scheme of valuation for the paper.
 - Question paper should be both in English and Telugu media.

Unit	Section - A		Section - B		Weightage in
	Questions	Marks	Questions	Marks	Marks
Unit – I	2		1		
	10		10		20
Unit - II	1		2		
	05		20		25
Unit – III	1		2		
	05		20		25
Unit – IV	3		1		
	15		10		25
Unit – V	1		2		
	05		20		25
Max. Q & marks	8	(x 5) = 40	8	(x 10) = 80	(Total questions =16) Total marks = 120
Max. Q and marks for Valuation	Questions	Marks	Questions	Marks	Max. marks
	4	(4 X 5M) = 20 M	5	(5 X 10M)= 50 M	70M

INTERNAL EXAMS - 30Marks

(20 marks for unit tests, 5 marks for seminar and remaining 5 marks for attendance).

PAPER-III

SEMESTER-III

(BOT- 301P)

Practical – III:

Plant Taxonomy and Plant Physiology

Total hours of laboratory Exercises 45 hrs @ 3 per week

-

Suggested Laboratory Exercises:

1. Systematic study of locally available plants belonging to the families prescribed in theory Syllabus.
2. Demonstration of herbarium techniques.
3. Osmosis – by potato osmoscope method.
4. Determination of osmotic potential of vacuolar sap by plasmolytic method using leaves of *Rhoeo* / *Tradescantia*.
5. Determination of rate of transpiration using cobalt chloride method.
6. Demonstration of transpiration by Ganong's potometer.
7. Demonstration of ascent of sap / Transpiration pull.
8. Study of mineral deficiency symptoms using plant material/photographs.
11. Field visits.
12. Preparation and submission of 25 herbarium specimens for evaluation during the practical Examination.

Plant Taxonomy and Plant Physiology

Time: 3 Hrs

Max. Marks: 50

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- | | |
|---|-----|
| 1. Describe specimen 'A' in technical terms. Draw neat labelled diagrams of twig with inflorescence, L.S of flower, T.S. of ovary, floral diagram and write the floral formula. | 11M |
| 2. Assign the Specimen 'B' to its family giving reasons. | 3M |
| 3. Write the salient features of experiment 'C' with the help of neat labelled diagram. | 05M |
| 4. Identify D & E. | 03M |
| 5. Herbarium. | 03M |
| Total | 25M |

Internal :

(Attendance – 5 M + Record -10M + Field trip diary – 5M + Viva – 2M+Assignment-3M)

Total -----50M

Scheme of valuation

Time: 3 Hrs.

External Marks: 25

- | | |
|---|--------|
| 1. Material 'A' - A twig with large sized flowers. (From the families mentioned in practical syllabus) Description of veg. parts = 2 M; Description of floral parts = 4 M; One mark each for the diagrams of Twig with flower, L.S. of flower, T.S of ovary, Floral diagram and Floral formula. | = 11 M |
| 2. Material 'B' – (Family name - 1, Identification with reasons - 2) | = 03M |
| 3. Material 'C' –Physiology –minor experiment (Salient features 3, Diagram 2M) | = 05M |
| 4. 'D' & 'E'(2 Herbarium sheets from students collection) | = 03M |
| 5. Herbarium. | = 03 M |
| [for each one, Botanical name - 1, Family – ½] | |

Internal :

(Attendance – 5 M + Record -10M + Field trip diary – 5M + Viva – 2M+Assignment-3M)

BOTANY	BOT-501C	2020-2021	B.Sc. (BZC)
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PAPER – V Cell Biology, Genetics and Plant Breeding SEMESTER-V (2020-2021)
Total Hours of teaching 60 hrs @ 6 hrs for Week Credits: 03

UNIT-I Cell Biology (12 hrs)

1. Cell, Ultra Structure and functions of cell wall.
2. Molecular Organization of cell membranes.
3. Chromosomes; morphology, organization of DNA in a chromosome (Nucleosome model) Euchromatin and Heterochromatin.

UNIT-II Genetic Material (12 hrs)

1. DNA as the Genetic Material: Griffith's and Avery's Transformation Experiment. Hershey - Chase Bacteriophage experiment.
2. DNA Structure (Watson & crick model) and replication of DNA (Semi Conservative).
3. Types of RNA (mRNA, tRNA, rRNA), their structure and function.

UNIT-III Mendelian Inheritance (12 hrs)

1. Mendelian Inheritance (Mono – Di-hybrid Crosses), Back cross and Text cross.
2. Linkage: concept, complete and In-complete Linkage, Coupling and Repulsion; Linkage Maps Based on Two and Three Point cross.
3. Crossing over concept and significance.

UNIT-IV Gene Expression (12 hrs)

1. Organization of gene, Transcription and Translation.
2. Mechanism and regulation of Gene Expression in Prokaryotes (Lac operon).
3. Mutations: Chromosomal Aberrations, Gene Mutations and Transposable Elements.

UNIT-V Plant Breeding (12 hrs)

1. Introduction and objectives of Plant Breeding.
2. Methods of Crop Improvement: Procedure, Advantages and limitations of Introduction, Selection and Hybridization (Out lines only).

**B.Sc – BOTANY
SEMESTER -V. THEORY MODEL PAPER**

Time: 3 Hours

Max. Marks: 70

SECTION-A

Answer any four of the following question

4x5=20M.

(Draw diagrams wherever necessary)

1. Nucleosome
2. Griffith experiment.
3. t RNA
4. Back cross and test cross.
5. Transcription.
6. Three point test cross.
7. Hybridization.
8. Crossing over.

SECTION-B

Answer all of the following questions.

5x10= 50M.

(Draw diagrams wherever necessary)

9. Describe the Ultra structure and functions of cell membrane.
10. What is cell theory? Write about eukaryotic cell components.
11. Write about structure and replication of DNA.
12. DNA as a genetic material proof with suitable experiments.
13. Explain the Mendel's law of inheritance.
14. Define linkage. Describe the different types of Linkage.
15. Write an essay on mechanism and Regulation of gene Expression in Prokaryotes.
16. Discuss about methods of Crop improvement.

Guide lines for paper setter: (for Paper V-BOT-501) W.e.f. 2020-21

1. In Section A: Unit I, III, V must carry one question from each unit. Unit II must carry 2 questions and Unit IV must carry three questions.

2. In section-B: Set minimum Two questions from Unit I, II & III
3. See the following table and Model paper.
4. Please provide the scheme of valuation for the paper.
5. Question paper should be both in English and Telugu media.

Unit	Section - A		Section - B		Weightage in
	Questions	Marks	Questions	Marks	Marks
Unit – I	1		2		
	5		20		25
Unit – II	2		2		
	10		20		30
Unit –III	1		2		
	5		20		25
Unit-IV	3		1		
	15		10		25
Unit-V	1		1		
	5		10		15
Max .Q & marks	8 (x 5) =40		8 (x 10) = 80		(Total questions =16) Marks 120
Max. Q and marks for Valuation	Questions	Marks	Questions	Marks	Max. marks
	4		5		
	(4 x 5) = 20		(5 x 10) = 50		70

INTERNAL EXAMS – 30 Marks

(20 marks for unit tests, 5 marks for Attendance 5 marks for seminars)

III B.SC-BOTANY Practical paper

Cell Biology, Genetics and Plant Breeding

SEMESTER-V

BOT-501-P

Time :3hr

Total hours of teaching 30hrs @ 2 hrs per week

Max.marks:50

-
1. Study of the structure of cell organelles through photomicrographs.
 2. Study of plant cell through temporary mounts.
 3. Study of various stages of mitosis using cytological preparation of Onion root tips.
 4. Study of DNA packing by micrographs.
 5. Numerical problems solving Mendal's Laws of inheritance.
 6. Chromosome mapping using 3 point test cross data.
 7. Hybridization techniques –emasculation. Bagging (for demonstration only).
 8. Field visit to a plant breeding research station.

III B.SC-SEMESTER-V, BOTANY PRACTICAL MODEL PAPER

PAPER –V: CELL BIOLOGY GENETICS AND PLANT BREEDING

1. Perform the Experiment A Squash technique..... 13M
2. Give the experimental protocol of the experiments. B.....04M
3. Solving numerical problems on Mendelian inheritance....C, D..... $2 \times 7 = 14$ M
4. Record.....05M
- Viva.....04M
- Internal Practical Exam.....10M

III B.SC-BOTANY Syllabus SEMESTER-V

Practical paper – V: Cell Biology, Genetics and Plant Breeding

Total hours of teaching 30hrs @ 2 hrs per week

1. Perform the Experiment A.

Squash technique5M
Procedure.....5M
diagram3M = 13

2. Give the experimental protocol of the experiments. B.....4M

3. Genetic problem C, D

Salvation of problem.....5 M
Reasoning.....2 M

2X7= 14M

Viva4M

Internal:

a) Record.....5M.
b)Internal Practical Exam.....10M

Books for Reference:

1. Old, R.W. and Primrose S.B. 1994, Principles of Gene Manipulation Blackwell Science, 19 London 2. Grierson, D. and Convey S.N. 1989, Plant Molecular Biology, Blackie Publishers, NewYork.
2. Lea, P.J. and Leegood R.C. 1999, Plant Biochemistry and Molecular Biology, John Wiley and Sons, London.
3. Power C.B., 1984, Cell Biology, Himalaya Publishing Co. Mumbai
4. De. Robertis and De Robertis, 1998, Cell and Moleceular Biology, K.M. Verghese andCompany .

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BOTANY	BOT-502	2020-2021	B.Sc. (BZC)
SEMESTER-V (2020-2021)			PAPER – VI

Total Hours of teaching 60 hrs @ 6 hrs for Week

UNIT-I-ELEMENTS OF ECOLOGY

(12 hrs)

1. Ecology: Definition, branches and significance of ecology.
2. Climatic factors: Light, Temperature.
3. Edaphic factor: Origin, formation, composition and soil profile.
4. Biotic factor, Ecological adaptations of Plants.

Unit- II. Ecosystem Ecology

(12 hrs)

1. Ecosystem: concept and components, energy flow, food chain, food web, Ecological Pyramids.
2. Productivity of ecosystem-Primary, Secondary and Net productivity.
3. Biogeochemical cycles- Carbon, Nitrogen and Phosphorous.

Unit -III Population & Community ecology.

(12 hrs)

1. Population-definition, characteristics and importance (Density, Natality, Mortality, Growth Curves) outlines-ecotypes.
2. Plant communities- characters of a community, outlines – Frequency, density, cover, life forms, Biological Spectrum.
3. Ecological Succession: Hydrosere and Xerosere

Unit-IV Phytogeography

(12 hrs)

1. Principles of Phytogeography, Distribution (Wides, Endemic, Discontinuous species).
2. Phytogeographic regions of India.
3. Endemism – types and Causes.

Unit-V Plant Biodiversity and its Importance

(12 hrs)

1. Definition, Levels of Biodiversity – genetic, species and ecosystem.
2. Biodiversity and Hot-spots of India: North Eastern, Himalayas and Western Ghats.
3. Loss of Biodiversity-causes and Conservation (In-situ and Ex-Situ Methods).

B.Sc – BOTANY

SEMESTER –VI THEORY MODEL PAPER

PLANT ECOLOGY & PHYTOGEOGRAPHY

Time: 3 Hours

Max. Marks: 70

SECTION-A

Answer any four of the following question.

4x5=20M.

(Draw diagrams wherever necessary)

1. Soil profile.
2. Biotic factor.
3. Food web.
4. Energy Flow in Ecosystem.
5. Natality.
6. Biological Spectrum
7. Endemism.
8. Red-Data book.

SECTION-B

Answer any Five of the following questions.

5x10=50M.

(Draw diagrams wherever necessary)

9. Discusses the importance of Temperature Factor on Plant Growth.
10. Briefly Discuss the Ecological Adaptations of Xerophytes.
11. What are Ecological Pyramids? Describe the Pyramids of numbers, BioMass and Energy.
12. What are biogeochemical cycles? Give an account of Nitrogen cycle?
13. What is Plant Succession? Describe Hydrosere?
14. What are the Characters of Plant Communities.
15. What are Principles of Plant Phytogeography.
16. What is Biodiversity? Explain the Levels of Biodiversity.

Guide lines for paper setter: (for Paper V-BOT-501) W.e.f. 2020-21

1. In Section A: Unit I, II, III, must carry Two question from each unit. Unit IV, V must carry

one question.

2. In section-B: Set minimum two questions from Unit I, II & III and Set One Question from IV, V.

3. See the following table and Model paper.

4. Please provide the scheme of valuation for the paper.

5. Question paper should be both in English and Telugu media.

Unit	Section – A		Section - B		Weightage in
	Questions	Marks	Questions	Marks	Marks
Unit – I	2		2		
	10		20		30
Unit – II	2		2		
	10		20		30
Unit – III	2		2		
	10		20		30
Unit-IV	1		1		
	5		10		15
Unit-V	1		1		
	5		10		15
Max. Q & marks	8 (x 5) = 40		8 (x 10) = 80		(Total questions = 16) Marks 120
Max. Q and marks for Valuation	Questions	Marks	Questions	Marks	Max. marks
	4		5		
	(4 x 5) = 20		(5 x 10) = 50		70

INTERNAL EXAMS - 30Marks

(20 mark for unit tests, 5 marks for assignments and remaining 5 marks for seminar etc.)

**BOTANY PRACTICAL
PLANT ECOLOGY & PHYTOGEOGRAPHY**

SEMESTER- V

BOT-502-P

Total hours of teaching 30 hrs @ 3 hrs per week

1. Study of instruments used to measure microclimatic variables; soil thermometer, maximum and minimum thermometer, anemometer, psychomotor, rain gauze, and lux meter.
2. Permeability (percolation; total capacity as well as rate of movement) of different soil samples.
3. Determination of soil pH
4. Study of morphological and anatomical adaptations of hydrophytes and xerophytes. (4each)
5. Determination of minimal quadrat size for the study of herbaceous vegetation in the college campus by species area curve method.
6. Study of Phytoplankton and macrophytes from water bodies.
7. Study of species diversity index of vegetation.
8. Estimation of Primary Productivity of an ecosystem.
9. To study field vegetation with respect to stratification, canopy cover and composition.
10. Study of plants included in agro forestry and social forestry.
11. To locate the hotspots, phyto geographical regions and distribution of endemic plants in the map of India.
12. The following practical should be conducted in the Field/lab with the help of Photographs, herbarium, Floras, Red data book- Study of endangered plants species, critically endangered plants species, vulnerable plant species and monotypic endemic genera of India.

BOTANY PRACTICAL
PLANT ECOLOGY & PHYTOGEOGRAPHY

SEMESTER- V

Total hours of teaching 30 hrs @ 3 hrs per week

BOT-502-P

-
-
1. Study Project under supervision.....12 Marks
 2. Experiment **A** 07Marks
 3. Anatomical adaptations of **B** (Section cutting)..... 07Marks
 4. Spotters **C&D**(2x2 1/2) = 5 Marks
 5. Record.....05Marks
 6. Viva-Voc.....04Mrks
 7. Internal practical exam.....10Marks

Total = 50 Marks

BOTANY PRACTICAL
PLANT ECOLOGY & PHYTOGEOGRAPHY

SEMESTER- V

BOT-502-P

Scheme of Valuation

1. Study Project under supervision
 To study Honey Bees and Plants Yielding Honey 12 Marks
2. Experiment **A** -determination of soil porosity/PH..... 07Marks
3. Anatomical adaptations of **B** (Section cutting)
 Xerophytes / Hydrophytes07Marks
4. Spotters **C&D** anemometer/rain gauze/lux meter (2x2 1/2) = 5 Marks
5. Viva-Voc.....04Mrks
6. Record.....05Marks
7. Internal practical exam.....10Marks

Total = 50 Marks

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF BOTANY

MINUTES OF BOARD OF STUDIES

ODD SEMESTER

16-07-2020

Minutes of the meeting of Board of studies in Botany for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 10:30 A.M on 16-07-2020 through Online.

Members Present:-

- 1) CH. Beulah Ranjani
(CH. Beulah Ranjani) Chairman Head, Department of Botany,
A.G & S.G.S Degree College of Arts
& Science (Autonomous), Vuyyuru.
- 2) G. Ramesh
(Dr. G.Ramesh) University Nominee Head, Department of Botany,
K.B.N.College, Vijayawada.
- 3) A. Srinivasa Rao
(Dr.A.Srinivasa Rao) Academic Council Nominee Lecturer in Botany,
Govt.Degree College Mandapeta,
East Godavari.
- 4) N. Manimala
(N.Manimala) Academic Council Nominee Head, Department of Botany,
Govt.Degree College, Chintalapudi.
- 5) S. Krishna Suman
(S.Krishna Suman) Industrialist Natural Farming,
Yakamuru, Vuyyuru, Krishna Dt.
- 6) N. Ramana Rao
(N.Ramana Rao) Member Adhoc Lecturer in Botany,
A.G & S.G.S Degree College of Arts
& Science (Autonomous), Vuyyuru.
- 7) E. Ganesh
(E.Ganesh) Member Adhoc Lecturer in Botany,
A.G & S.G.S Degree College of Arts
& Science (Autonomous), Vuyyuru.
- 8) K. Anusha
(K.Anusha) Student Representative Lecturer, Chaitanya College,
Vuyyuru.

Agenda for B.O.S Meeting.

1. To recommend the syllabi (Theory & Practical), Model question paper for I Semester of I B.Sc (B.Z.C), (A.B.C) for the academic year 2020 - 2021.
2. To recommend the syllabi (Theory & Practical), Model question paper for III Semester of II B.Sc (B.Z.C), (A.B.C) for the academic year 2020 - 2021.
3. To recommend the syllabi (Theory & Practical), Model question paper for V Semester of III B.Sc (B.Z.C), (A.B.C) for the academic year 2020 - 2021.
4. To recommend the syllabi (Theory & Practical), Model question paper and Blue print of I, III & V semester of I, II & III B.Sc (B.Z.C), (A.B.C.) for the academic year 2020 - 2021.
5. To recommend the syllabi of Competitive Botany as Unit- VI in I, III Semesters for the Academic year 2020 - 2021.
6. To recommend the teaching and evolution methods to be followed under Autonomous statues.
7. Any other matter.

C. B. Rajani
Chairman.

Resolutions:

1. It is resolved to implement the changed syllabi (Theory & Practical), model question paper & guide lines to be followed by the question paper setters of Botany of I semesters of I B.Sc (B.Z.C) and I B.Sc. Aquaculture under Choice Based Credit System (CBCS) for the academic year 2020-21.

2. It is resolved to implement the same syllabi (Theory & Practical), model question paper & guide lines to be followed by the question papers setters under Choice Based Credit System (CBCS) of III semester of II B.Sc. (B.Z.C) as approved by the Academic Council of 2019-20.

3. It is resolved to implement the same syllabi & model papers under Choice Based Credit System (CBCS) for semester V of III B.Sc. (B.Z.C) as approved by the Academic Council of 2019-20. It is resolved to implement Plant Nursery as SDC with course Code PNT-501 for V semester students.

4. It is resolved to continue the same Blue prints of I, III and V Semesters of B. Sc Botany for the Academic year 2020-21.

6. It is resolved to implement certificate course on for II Year students.

7. It is resolved to continue the following teaching and evaluation methods for the Academic year 2020-21

Teaching and Evaluation methods:

Internal Assessment

- Out of the maximum 100marks in each paper for I, II & III B. Sc. BZC and Aquaculture 30 marks shall be allocated for Internal Assessment.
- Out of these 30 marks, 20marks are allocated for announced tests (ie; IA-I & IA-II). Two announced tests will be conducted and average of these two tests shall be deemed as the marks obtained by the students. 5 marks are allocated on candidate's percentage of attendance.

Semester End Examination:

- The maximum marks for I, III and V Semesters BZC and ABC Semester End examination shall be 70marks and duration of the examination is 3 hours. Even though the candidate is absent for both two IA exams/obtain Zero marks the external marks are considered if the candidate gets 40 out of 70 and the result shall be declared as PASS.
- Semester End Examination shall be conducted in theory and practical papers at the end of every semester of I, III, & V Semesters of I, II & III B. Sc. BZC and Aquaculture.
- Discussed and recommended for organising seminars, guest lectures, work-shops to upgrade the knowledge of students for the approval of the Academic council.

C. B. Rajani

Chairman

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BOTANY	BOT - 101C	w.e.f. 2020-21	B. Sc. (BZC)
SEMESTER - I	Fundamentals of Microbes and Non-vascular Plants		PAPER - I
(Viruses, Bacteria, Fungi, Lichens, Algae and Bryophytes)			

Unit – 1: Origin of life and Viruses **12Hrs.**

1. Origin of life, five kingdom classification of R.H. Whittaker
2. Discovery of microorganisms, Pasteur experiments, germ theory of diseases.
3. Shape and symmetry of viruses; structure of TMV and multiplication of TMV; A brief account of Prions and Viroids.
4. A general account on symptoms of plant diseases caused by Viruses. Transmission of plant viruses and their control.

Unit – 2: Special groups of Bacteria and Eubacteria **12Hrs.**

1. Brief account of Archaeobacteria, Actinomycetes and Cyanobacteria.
2. Cell structure and nutrition of Eubacteria.
3. Reproduction- Asexual (Binary fission and endospores) and bacterial recombination (Conjugation, Transformation, Transduction).
4. Economic importance of Bacteria with reference to their role in Agriculture and industry (fermentation and medicine).
5. A general account on symptoms of plant diseases caused by Bacteria; Citrus canker.

Unit – 3: Fungi & Lichens **12 Hrs.**

1. General characteristics of fungi and Ainsworth classification (upto classes).
2. Structure, reproduction and life history of (a) *Rhizopus* (Zygomycota) and (b) *Puccinia* (Basidiomycota).
3. Economic uses of fungi in food industry, pharmacy and agriculture.
4. A general account on symptoms of plant diseases caused by Fungi; Blast of Rice.
5. Lichens- structure and reproduction; ecological and economic importance.

Unit – 4: Algae **12 Hrs.**

1. General characteristics of Algae (pigments, flagella and reserve food material); Fritsch classification. (upto classes).
2. Thallus organization and life cycles in Algae.
3. Occurrence, structure, reproduction and life cycle of (a) *Spirogyra* (Chlorophyceae) and (b) *Oedogonoum* (chlorophyceae) .
4. Economic importance of Algae.

Unit – 5: Bryophytes **12 Hrs.**

1. General characteristics of Bryophytes; classification upto classes.
2. Occurrence, morphology, anatomy, reproduction (developmental details are not needed) and life cycle of (a) *Marchantia* (Hepaticopsida) and (b) *Funaria* (Bryopsida).
3. General account on evolution of sporophytes in Bryophyta.

BOTANY	BOT-301C	w.e.f. 2020-21	B. Sc. (BZC)
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II B. Sc - BOTANY

SEMESTER - III

PAPER – III

Plant Taxonomy and Plant Physiology

Hours: 60 @ 4 hrs per week

Credits: 3

UNIT – I: Introduction to Plant Taxonomy

(12 hrs)

1. Fundamental components of taxonomy (identification, nomenclature, classification types and phylogeny)
2. Salient features of Bentham & Hooker classification.
3. Role of chemotaxonomy, cytotoxicity and Embryology in relation to Taxonomy.
4. APG IV System of Classification – 2016.

UNIT –II: Systematic Taxonomy

(12 hrs)

1. Nomenclature and Taxonomic resources: An introduction to International Code of Botanical Nomenclature; Principles, Rules and Recommendations.
2. Systematic study and economic importance of plants belonging to the following families: Annonaceae, Capparidaceae, Rutaceae, Cucurbitaceae and Apiaceae

UNIT –III: Systematic Taxonomy

(12 hrs)

1. Systematic study and economic importance of plants belonging to the following families: Asteraceae, Asclepiadaceae, Lamiaceae, Euphorbiaceae, Orchidaceae and Poaceae.

Plant Physiology

UNIT – IV: Plant – Water relations

(12 hrs)

1. Importance of water to plant life, physical properties of water,
2. Diffusion, Imbibition and osmosis; water potential, osmotic potential and pressure potential.
3. Absorption, transport of water, ascent of sap.
4. Transpiration – types, stomata structure, movements and significance.

UNIT –V: Mineral nutrition, Fertilizers and Enzymes

(12 hrs)

1. Mineral Nutrition: Essential macro and micro mineral nutrients and their role, mineral uptake (active and passive), deficiency symptoms.
2. Nitrogen cycle- biological nitrogen fixation.
3. Enzymes: Nomenclature, characteristics, mechanism and regulation of enzyme action, enzyme kinetics, factors regulating enzyme action.

UNIT –VI (Competitive Syllabus)

1. Definitions of Growth and Classification Based on Growth Habits.
2. Fruitarianism – Introduction, Varieties, Nutrition and Nutritional effects Vitamin B12
3. Biological Nitrogen Fixation.

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BOTANY	BOT- 301C	w.e.f. 2020-21	B. Sc. (BZC)
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II B. Sc – BOTANY

Model Question Paper

SEMESTER- III

PAPER-III: Plant Taxonomy and Plant Physiology

Time: 3 Hours

Max. Marks: 70

SECTION-A

Answer any **four** of the following questions.

4x5 = 20Marks

(Draw diagrams wherever necessary)

1. Binomial nomenclature.
2. Cytotaxonomy.
3. Fruit in Rutaceae.
4. Pollination mechanism in Lamiaceae.
5. Water potential.
6. Types of Transpiration.
7. Imbibition.
8. Nitrogen.

SECTION-B

Answer any **five** of the following questions.

5x10 = 50Marks

(Draw diagrams wherever necessary)

9. Explain in brief Bentham & Hookers system of classification. Discuss the merits and demerits of the system.
10. Describe vegetative and floral characters of the family Cucurbitaceae.
11. Write an essay on ICBN.
12. Describe vegetative & floral characters of Asclepiadaceae.
13. Describe floral characters and economic importance of Euphorbiaceae.
14. Write an essay on Ascent of sap.
15. Write an essay on the absorption of mineral ions.
16. Explain the enzyme action and add a note on the factors that effect enzyme activity.

Guide lines for paper setter: (for Paper III – BOT- 301) w.e.f 2020-21

1. In **section A**: Unit II, III & V must carry **one** question from each Unit, Unit I must carry

- two** questions and Unit IV must carry **three** questions.
- In **section- B**: Set minimum **two** questions from Unit II, III & V. **One** question each from Unit I and Unit IV.
 - See the following table and Model paper for marks distribution.
 - Please provide the scheme of valuation for the paper.
 - Question paper should be both in English and Telugu media.

Unit	Section - A		Section - B		Weightage in
	Questions	Marks	Questions	Marks	Marks
Unit – I	2		1		
	10		10		20
Unit - II	1		2		
	05		20		25
Unit – III	1		2		
	05		20		25
Unit – IV	3		1		
	15		10		25
Unit – V	1		2		
	05		20		25
Max. Q & marks	8	(x 5) = 40	8	(x 10) = 80	(Total questions =16) Total marks = 120
Max. Q and marks for Valuation	Questions	Marks	Questions	Marks	Max. marks
	4	(4 X 5M) = 20 M	5	(5 X 10M)= 50 M	70M

INTERNAL EXAMS - 30Marks

(20 marks for unit tests, 5 marks for seminar and remaining 5 marks for attendance).

PAPER-III

SEMESTER-III

(BOT- 301P)

Practical – III:

Plant Taxonomy and Plant Physiology

Total hours of laboratory Exercises 45 hrs @ 3 per week

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Suggested Laboratory Exercises:

1. Systematic study of locally available plants belonging to the families prescribed in theory Syllabus.
2. Demonstration of herbarium techniques.
3. Osmosis – by potato osmoscope method.
4. Determination of osmotic potential of vacuolar sap by plasmolytic method using leaves of *Rhoeo* / *Tradescantia*.
5. Determination of rate of transpiration using cobalt chloride method.
6. Demonstration of transpiration by Ganong's potometer.
7. Demonstration of ascent of sap / Transpiration pull.
8. Study of mineral deficiency symptoms using plant material/photographs.
11. Field visits.
12. Preparation and submission of 25 herbarium specimens for evaluation during the practical Examination.

Plant Taxonomy and Plant Physiology

Time: 3 Hrs

Max. Marks: 50

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1. Describe specimen 'A' in technical terms. Draw neat labelled diagrams of twig with inflorescence, L.S of flower, T.S. of ovary, floral diagram and write the floral formula. 11M
 2. Assign the Specimen 'B' to its family giving reasons. 3M
 3. Write the salient features of experiment 'C' with the help of neat labelled diagram. 05M
 4. Identify D & E. 03M
 5. Herbarium. 03M
- Total 25M

Internal :

(Attendance – 5 M + Record -10M + Field trip diary – 5M + Viva – 2M+Assignment-3M)

Total -----50M

Scheme of valuation

Time: 3 Hrs.

External Marks: 25

1. Material 'A' - A twig with large sized flowers. (From the families mentioned in practical syllabus) Description of veg. parts = 2 M; Description of floral parts = 4 M; One mark each for the diagrams of Twig with flower, L.S. of flower, T.S of ovary, Floral diagram and Floral formula. = 11 M
 2. Material 'B' – (Family name - 1, Identification with reasons - 2) = 03M
 3. Material 'C' –Physiology –minor experiment (Salient features 3, Diagram 2M) = 05M
 4. 'D' & 'E' (2 Herbarium sheets from students collection) = 03M
 5. Herbarium. = 03 M
- [for each one, Botanical name - 1, Family – ½]

Internal :

(Attendance – 5 M + Record -10M + Field trip diary – 5M + Viva – 2M+Assignment-3M)

BOTANY	BOT-501C	2020-2021	B.Sc. (BZC)
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PAPER – V Cell Biology, Genetics and Plant Breeding SEMESTER-V (2020-2021)
Total Hours of teaching 60 hrs @ 6 hrs for Week Credits: 03

UNIT-I Cell Biology (12 hrs)

1. Cell, Ultra Structure and functions of cell wall.
2. Molecular Organization of cell membranes.
3. Chromosomes; morphology, organization of DNA in a chromosome (Nucleosome model) Euchromatin and Heterochromatin.

UNIT-II Genetic Material (12 hrs)

1. DNA as the Genetic Material: Griffith's and Avery's Transformation Experiment. Hershey - Chase Bacteriophage experiment.
2. DNA Structure (Watson & crick model) and replication of DNA (Semi Conservative).
3. Types of RNA (mRNA, tRNA, rRNA), their structure and function.

UNIT-III Mendelian Inheritance (12 hrs)

1. Mendelian Inheritance (Mono – Di-hybrid Crosses), Back cross and Text cross.
2. Linkage: concept, complete and In-complete Linkage, Coupling and Repulsion; Linkage Maps Based on Two and Three Point cross.
3. Crossing over concept and significance.

UNIT-IV Gene Expression (12 hrs)

1. Organization of gene, Transcription and Translation.
2. Mechanism and regulation of Gene Expression in Prokaryotes (Lac operon).
3. Mutations: Chromosomal Aberrations, Gene Mutations and Transposable Elements.

UNIT-V Plant Breeding (12 hrs)

1. Introduction and objectives of Plant Breeding.
2. Methods of Crop Improvement: Procedure, Advantages and limitations of Introduction, Selection and Hybridization (Out lines only).

**B.Sc – BOTANY
SEMESTER -V. THEORY MODEL PAPER**

Time: 3 Hours

Max. Marks: 70

SECTION-A

Answer any four of the following question

4x5=20M.

(Draw diagrams wherever necessary)

1. Nucleosome
2. Griffith experiment.
3. t RNA
4. Back cross and test cross.
5. Transcription.
6. Three point test cross.
7. Hybridization.
8. Crossing over.

SECTION-B

Answer all of the following questions.

5x10= 50M.

(Draw diagrams wherever necessary)

9. Describe the Ultra structure and functions of cell membrane.
10. What is cell theory? Write about eukaryotic cell components.
11. Write about structure and replication of DNA.
12. DNA as a genetic material proof with suitable experiments.
13. Explain the Mendel's law of inheritance.
14. Define linkage. Describe the different types of Linkage.
15. Write an essay on mechanism and Regulation of gene Expression in Prokaryotes.
16. Discuss about methods of Crop improvement.

Guide lines for paper setter: (for Paper V-BOT-501) W.e.f. 2020-21

1. In Section A: Unit I, III, V must carry one question from each unit. Unit II must carry 2 questions and Unit IV must carry three questions.

2. In section-B: Set minimum Two questions from Unit I, II & III
3. See the following table and Model paper.
4. Please provide the scheme of valuation for the paper.
5. Question paper should be both in English and Telugu media.

Unit	Section - A		Section - B		Weightage in
	Questions	Marks	Questions	Marks	Marks
Unit – I	1		2		
	5		20		25
Unit – II	2		2		
	10		20		30
Unit –III	1		2		
	5		20		25
Unit-IV	3		1		
	15		10		25
Unit-V	1		1		
	5		10		15
Max .Q & marks	8 (x 5) =40		8 (x 10) = 80		(Total questions =16) Marks 120
Max. Q and marks for Valuation	Questions	Marks	Questions	Marks	Max. marks
	4		5		
	(4 x 5) = 20		(5 x 10) = 50		70

INTERNAL EXAMS – 30 Marks

(20 marks for unit tests, 5 marks for Attendance 5 marks for seminars)

III B.SC-BOTANY Practical paper

Cell Biology, Genetics and Plant Breeding

SEMESTER-V

BOT-501-P

Time :3hr

Total hours of teaching 30hrs @ 2 hrs per week

Max.marks:50

-
1. Study of the structure of cell organelles through photomicrographs.
 2. Study of plant cell through temporary mounts.
 3. Study of various stages of mitosis using cytological preparation of Onion root tips.
 4. Study of DNA packing by micrographs.
 5. Numerical problems solving Mendal's Laws of inheritance.
 6. Chromosome mapping using 3 point test cross data.
 7. Hybridization techniques –emasculation. Bagging (for demonstration only).
 8. Field visit to a plant breeding research station.

III B.SC-SEMESTER-V, BOTANY PRACTICAL MODEL PAPER

PAPER –V: CELL BIOLOGY GENETICS AND PLANT BREEDING

1. Perform the Experiment A Squash technique..... 13M
2. Give the experimental protocol of the experiments. B.....04M
3. Solving numerical problems on Mendelian inheritance....C, D..... $2 \times 7 = 14$ M
4. Record.....05M
- Viva.....04M
- Internal Practical Exam.....10M

III B.SC-BOTANY Syllabus SEMESTER-V

Practical paper – V: Cell Biology, Genetics and Plant Breeding

Total hours of teaching 30hrs @ 2 hrs per week

1. Perform the Experiment A.

Squash technique5M
Procedure.....5M
diagram3M = 13

2. Give the experimental protocol of the experiments. B.....4M

3. Genetic problem C, D

Salvation of problem.....5 M
Reasoning.....2 M

2X7= 14M

Viva4M

Internal:

a) Record.....5M.
b)Internal Practical Exam.....10M

Books for Reference:

1. Old, R.W. and Primrose S.B. 1994, Principles of Gene Manipulation Blackwell Science, 19 London 2. Grierson, D. and Convey S.N. 1989, Plant Molecular Biology, Blackie Publishers, NewYork.
2. Lea, P.J. and Leegood R.C. 1999, Plant Biochemistry and Molecular Biology, John Wiley and Sons, London.
3. Power C.B., 1984, Cell Biology, Himalaya Publishing Co. Mumbai
4. De. Robertis and De Robertis, 1998, Cell and Moleceular Biology, K.M. Verghese andCompany .

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BOTANY	BOT-502	2020-2021	B.Sc. (BZC)
SEMESTER-V (2020-2021)			PAPER – VI

Total Hours of teaching 60 hrs @ 6 hrs for Week

UNIT-I-ELEMENTS OF ECOLOGY

(12 hrs)

1. Ecology: Definition, branches and significance of ecology.
2. Climatic factors: Light, Temperature.
3. Edaphic factor: Origin, formation, composition and soil profile.
4. Biotic factor, Ecological adaptations of Plants.

Unit- II. Ecosystem Ecology

(12 hrs)

1. Ecosystem: concept and components, energy flow, food chain, food web, Ecological Pyramids.
2. Productivity of ecosystem-Primary, Secondary and Net productivity.
3. Biogeochemical cycles- Carbon, Nitrogen and Phosphorous.

Unit -III Population & Community ecology.

(12 hrs)

1. Population-definition, characteristics and importance (Density, Natality, Mortality, Growth Curves) outlines-ecotypes.
2. Plant communities- characters of a community, outlines – Frequency, density, cover, life forms, Biological Spectrum.
3. Ecological Succession: Hydrosere and Xerosere

Unit-IV Phytogeography

(12 hrs)

1. Principles of Phytogeography, Distribution (Wides, Endemic, Discontinuous species).
2. Phytogeographic regions of India.
3. Endemism – types and Causes.

Unit-V Plant Biodiversity and its Importance

(12 hrs)

1. Definition, Levels of Biodiversity – genetic, species and ecosystem.
2. Biodiversity and Hot-spots of India: North Eastern, Himalayas and Western Ghats.
3. Loss of Biodiversity-causes and Conservation (In-situ and Ex-Situ Methods).

B.Sc – BOTANY

SEMESTER –VI THEORY MODEL PAPER

PLANT ECOLOGY & PHYTOGEOGRAPHY

Time: 3 Hours

Max. Marks: 70

SECTION-A

Answer any four of the following question.

4x5=20M.

(Draw diagrams wherever necessary)

1. Soil profile.
2. Biotic factor.
3. Food web.
4. Energy Flow in Ecosystem.
5. Natality.
6. Biological Spectrum
7. Endemism.
8. Red-Data book.

SECTION-B

Answer any Five of the following questions.

5x10=50M.

(Draw diagrams wherever necessary)

9. Discusses the importance of Temperature Factor on Plant Growth.
10. Briefly Discuss the Ecological Adaptations of Xerophytes.
11. What are Ecological Pyramids? Describe the Pyramids of numbers, BioMass and Energy.
12. What are biogeochemical cycles? Give an account of Nitrogen cycle?
13. What is Plant Succession? Describe Hydrosere?
14. What are the Characters of Plant Communities.
15. What are Principles of Plant Phytogeography.
16. What is Biodiversity? Explain the Levels of Biodiversity.

Guide lines for paper setter: (for Paper V-BOT-501) W.e.f. 2020-21

1. In Section A: Unit I, II, III, must carry Two question from each unit. Unit IV, V must carry

one question.

2. In section-B: Set minimum two questions from Unit I, II & III and Set One Question from IV, V.

3. See the following table and Model paper.

4. Please provide the scheme of valuation for the paper.

5. Question paper should be both in English and Telugu media.

Unit	Section – A		Section - B		Weightage in
	Questions	Marks	Questions	Marks	Marks
Unit – I	2		2		30
	10		20		
Unit – II	2		2		30
	10		20		
Unit – III	2		2		30
	10		20		
Unit-IV	1		1		15
	5		10		
Unit-V	1		1		15
	5		10		
Max. Q & marks	8 (x 5) = 40		8 (x 10) = 80		(Total questions = 16) Marks 120
Max. Q and marks for Valuation	Questions	Marks	Questions	Marks	Max. marks
	4		5		70
	(4 x 5) = 20		(5 x 10) = 50		

INTERNAL EXAMS - 30Marks

(20 mark for unit tests, 5 marks for assignments and remaining 5 marks for seminar etc.)

**BOTANY PRACTICAL
PLANT ECOLOGY & PHYTOGEOGRAPHY**

SEMESTER- V

BOT-502-P

Total hours of teaching 30 hrs @ 3 hrs per week

1. Study of instruments used to measure microclimatic variables; soil thermometer, maximum and minimum thermometer, anemometer, psychomotor, rain gauze, and lux meter.
2. Permeability (percolation; total capacity as well as rate of movement) of different soil samples.
3. Determination of soil pH
4. Study of morphological and anatomical adaptations of hydrophytes and xerophytes. (4each)
5. Determination of minimal quadrat size for the study of herbaceous vegetation in the college campus by species area curve method.
6. Study of Phytoplankton and macrophytes from water bodies.
7. Study of species diversity index of vegetation.
8. Estimation of Primary Productivity of an ecosystem.
9. To study field vegetation with respect to stratification, canopy cover and composition.
10. Study of plants included in agro forestry and social forestry.
11. To locate the hotspots, phyto geographical regions and distribution of endemic plants in the map of India.
12. The following practical should be conducted in the Field/lab with the help of Photographs, herbarium, Floras, Red data book- Study of endangered plants species, critically endangered plants species, vulnerable plant species and monotypic endemic genera of India.

**BOTANY PRACTICAL
PLANT ECOLOGY & PHYTOGEOGRAPHY**

SEMESTER- V

Total hours of teaching 30 hrs @ 3 hrs per week

BOT-502-P

-
-
1. Study Project under supervision.....12 Marks
 2. Experiment **A** 07Marks
 3. Anatomical adaptations of **B** (Section cutting)..... 07Marks
 4. Spotters **C&D**(2x2 1/2) = 5 Marks
 5. Record.....05Marks
 6. Viva-Voc.....04Mrks
 7. Internal practical exam.....10Marks

Total = 50 Marks

BOTANY PRACTICAL
PLANT ECOLOGY & PHYTOGEOGRAPHY

SEMESTER- V

BOT-502-P

Scheme of Valuation

1. Study Project under supervision
 To study Honey Bees and Plants Yielding Honey 12 Marks
2. Experiment **A** -determination of soil porosity/PH..... 07Marks
3. Anatomical adaptations of **B** (Section cutting)
 Xerophytes / Hydrophytes07Marks
4. Spotters **C&D** anemometer/rain gauze/lux meter (2x2 1/2) = 5 Marks
5. Viva-Voc.....04Mrks
6. Record.....05Marks
7. Internal practical exam.....10Marks

Total = 50 Marks

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF CHEMISTRY

MINUTES OF BOARD OF STUDIES

ODD SEMESTER

08-07-2020

Minutes of the Online meeting of Board of studies in Chemistry for the Autonomous course of A.G. & S.G. Siddhartha Degree College of Arts & Science, Vuyyuru held at 11.00 am on 08-07-2020.

Smt A.INDIRA Presiding

Members Present:

- 1) A. Indira
(Smt.A.Indira) Chairman HOD, Dept. of Chemistry,
A.G. & S.G.S.Degree College,Vuyyuru.
- 2)
(Prof.D.Ramasekhar Reddy) University Nominee Assistant Professor,
Dept. of Chemistry,Krishna University, MTM.
- 3)
(Dr.K.A.Emanuel) Academic Council Nominee Associate Professor in Chemistry,
Sir C.R.Reddy College,Eluru.
- 4)
(Dr.D.Bala karuna kumar) Academic Council Nominee Associate Professor in Chemistry,
A.L.C College,Vijayawada.
- 5)
(Dr.Nadella Taraka Ramarao) Industrialist Manager, Q.C, Divis Laboratories Ltd,
Vizag.
- 6)
(Dr.V.Phani Kumar) Student Nominee Lecturer in Chemistry,
SRR&CVR Govt. Degree College, BZA.
- 7) K. Ramesh
(Sri.K.Ramesh) Member Lecturer in Chemistry,
A.G. & S.G.S.Degree College,Vuyyuru.
- 8) M. Venkateswari
(Smt.M.V.Santhi) Member Lecturer in Chemistry,
A.G. & S.G.S.Degree College,Vuyyuru.
- 9) G. Ramesh
(Sri.G.Ramesh) Member Lecturer in Chemistry,
A.G. & S.G.S.Degree College, Vuyyuru.
- 10) P. Suresh
(Sri.P.Suresh) Member Lecturer in Chemistry,
A.G. & S.G.S.Degree College,Vuyyuru.
- 11) M. Santhi
(Ms.M.Santhi) Member Lecturer in Chemistry,
A.G. & S.G.S.Degree College,Vuyyuru.
- 12)
(Sri.J.Nageswara Rao) Member Rtd.Lecturer in Chemistry,
A.G. & S.G.S.Degree College,Vuyyuru.

Agenda for B.O.S Meeting

1. To recommend the syllabus and model paper for I semester of I Degree B.Sc., Chemistry for the Academic year 2020-2021.
2. To recommend the syllabus and model papers for III semester of II Degree B.Sc., Chemistry for the Academic year 2020-2021.
3. To recommend the syllabus and model papers for V semester of III Degree B.Sc. Chemistry for the Academic year 2020-2021.
4. To recommend the Blue print of I,III,V semesters of B.Sc. Chemistry for the Academic year 2020-2021.
5. To recommend the Guidelines to be followed by the question paper setters in Chemistry for I, III, V Semester – end exams.
6. To recommend the teaching and evaluation methods to be followed under Autonomous status.
7. Any suggestions regarding certificate course, seminars, workshops, Guest lecture to be organized.
8. Recommend the panel of paper setters and Examiners to the controller of Examinations of autonomous
Courses of A.G. & S.G.S.Degree colleges of Arts & Science, Vuyyuru.
9. Any other matter.


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Chairman.

RESOLUTIONS

- 1) It is resolved to change new **syllabus and model paper for I semesters of I B.Sc.** under Choice Based Credit System (CBCS) for the Academic year 2020-21.
 - **Syllabus of five units will be changed in sem-1 with paper title Inorganic and Physical chemistry.**
- 2) It is resolved to implement the same syllabus **and model papers** under Choice Based Credit System (CBCS) for the Academic year 2020-21 for **III semester of II B.Sc.**
- 3) It is resolved to implement the same **syllabus and model papers** under Choice Based Credit System (CBCS) for the Academic year 2020-21 for **V semester of III B.Sc.**
- 4) It is resolved to follow the **Blue prints** of I, III semesters of Degree B.Sc. for the Academic year 2019-20. It is resolved to continue the same **Blue prints** of V semesters of Degree B.Sc. for the Academic year 2020-21.
- 5) It is resolved to follow the **guidelines** to be followed by the question paper setters of Chemistry for I, III semesters of Degree B.Sc. for the Academic Year 2019-20. It is resolved to continue the same **guidelines** to be followed by the question paper setters of Chemistry for V semester of Degree B.Sc. for the Academic Year 2020-21.
- 6) It is resolved to continue the following teaching and evolution methods for Academic year 2020-21.

Teaching Methods:

Besides the conventional methods of teaching, we use modern technology i.e. using of LCD projector to display on U boards etc, for better understanding of concepts.

Evaluation of a student is done by the following procedure:

- **Internal Assessment Examinations:**
- Out of maximum 100 marks in each paper for I, II B.Sc, 30 marks shall be allocated for internal assessment.
- Out of these 30 marks, **20 marks are allocated for announced tests (i.e. IA-1 & IA-2)**. Two announced tests will be conducted and average of these two tests shall be deemed as the marks obtained by the student, **5 marks** are allocated on the basis of candidate's **percentage of attendance and remaining 5 marks are allocated for the innovative component like assignment/quiz/seminars for IB.Sc.**
- There is **no pass minimum** for internal assessment for I, II B.Sc.
- Out of maximum 100 marks in each paper for III B.Sc, 25 marks shall be allocated for internal assessment.
- Out of these 25 marks, **15 marks are allocated for announced tests (i.e. IA-1 & IA-2)**. Two announced tests will be conducted and average of these two tests shall be deemed as the marks obtained by the student, **5 marks** are allocated on the basis of candidate's **percentage of attendance and remaining 5 marks are allocated for the assignment for III B.Sc.**
- **Semester – End Examination:**

- The maximum mark for I, II B.Sc Semester – End examination shall be 70 marks and duration of the examination shall be 3 hours. Even though the candidate is absent for two IA exams /obtain Zero marks the external marks are considered (if the candidate gets 40/70) and the result shall be declared as “PASS”.
 - The maximum marks for III B.Sc Semester – End examination shall be 75 marks and duration of the examination shall be 3 hours.
 - Semester – End examinations shall be conducted in theory papers at the end of every semester, while in practical papers, these examinations are conducted at the end of I,III, & V semesters for I, II &III B.Sc.
- 7) Discussed and recommended for organizing **certificate course, seminars, Guest lecturers, workshops** to upgrade the knowledge of students, for the approval of the academic council.
 - 8) Discussed and empowered the Head of the department of Chemistry to suggest the panel of paper setters and examiners to the controller of examinations. **Department of Chemistry Adopted Value Added Course “Green Chemistry”.**
 - 9) NIL.


Chairman

SEMESTER-I	PAPER CODE : CHE-101C
PAPER TITLE : INORGANIC & PHYSICAL CHEMISTRY, PAPER – I	

TOTAL PERIODS - 60 (4hrs/week) Credits - 3

INORGANIC CHEMISTRY

UNIT -I (M.W-10 + 10 + 5) 10h

Chemistry of P-block elements:

Inorganic polymers : Inert pair effect, types of inorganic polymers, comparison with organic polymers, synthesis & structure aspects and applications of, Borazines, Silicones, Silicates and Phosphazenes, Structures of Oxides and Oxoacids of Sulphur. Structures of Inter halogen compounds & Pseudo halogens.

UNIT -II

1. **Transition Elements:** (M.W-10 +5) 6hrs

Characteristics of d-block elements with special reference to electronic configuration, Variable valence, magnetic properties, catalytic properties and ability to form complexes. Stability of various oxidation states.

2. **Inner transition Elements:** (M.W - 5+5) 6 hrs

Chemistry of lanthanides - electronic configuration, oxidation states, lanthanide contraction & Its Consequences, Magnetic properties. Chemistry of actinides -Electronic configuration, Oxidation states, Actinide contraction, Comparison of Lanthanides and Actinides.

PHYSICAL CHEMISTRY

UNIT-III

1. **Solid State:** (M.W-10+5) 10h

Characteristics of the Solid state, Law of constancy of interfacial angles, Law of rationality of indices. Miller indices, Symmetry in crystals. Definition of Lattice point, Space lattice, Unit cell. Seven crystal systems and 14 Bravais lattices, X-ray diffraction, Bragg's law. Defects in crystals.

2. **Gaseous state:** (M.W-10) 5h

Vander Waal's equation of state. Andrew's isotherms of Carbon dioxide, Continuity of state. Critical phenomena. Relationship between critical constants and Vander Waal's constants. Law of corresponding states.

UNIT-IV

1. **Liquid Crystals:** (M.W-10) 4 h

Liquid crystals, Mesomorphic state. Classification of liquid crystals into Smectic and Nematic. Differences between liquid crystal and solid/liquid. Application of liquid crystals as LCD devices.

2. **Liquid Mixtures:** (M.W-10+5) 10

Definition, Types of liquid mixtures, Examples. Miscible liquid mixture- Azeotropes -HCl-H₂O Ethanol-water systems. Partially miscible liquid mixture-Phenol -Water, Critical Solution temperature- Effect of impurity on Consolute temperature. Immiscible liquid mixtures-steam distillation, Nernst distribution law calculation of partition coefficient & its applications.

UNIT-V

1. Colligative Properties:

(M.W-10+5)

6h

Colligative properties. Relative lowering of vapour pressure, Elevation of boiling point -Experimental method -Cottrell's method, Depression in freezing point- Experimental method - Beckmann's method, Osmosis, Osmotic pressure- Experimental method-Berkeley-Hartley method. Abnormal Colligative properties Van't Hoff factor.

2. Ionic Equilibrium:

(M.W-5)

3h

Common ion effect, Ionic product, solubility and solubility product calculations based on solubility product.

List of Text Books

1. Selected topics in inorganic chemistry by W.D.Malik, G..D.Tuli,R.D.Madan
2. Inorganic Chemistry J E Huheey, E A Keiter and R L Keiter
3. Inorganic Chemistry by J.E.Huheey
4. Basic Inorganic Chemistry by Cotton and Wilkinson
5. Advanced Physical chemistry by Guru deep Raj
6. Advanced Physical chemistry by Bahl & Tuli
7. Text book of Physical Chemistry by S.Glasstone
8. Solid state Chemistry & its applications by Anthony R.West

SEMESTER - I

PAPER CODE : CHE-101C

PAPER TITLE : INORGANIC AND PHYSICAL CHEMISTRY, PAPER-I

Time: 3Hours

Maximum marks: 70

Pass marks: 28

SECTION-A

Answer any FOUR of the following. Each question carries 5 marks. 4X5=20M

1. Write any two preparations methods of Silicones?
2. Write electronic configurations of 4d Series?
3. Write the electronic configuration of Actinides?
4. Write oxidation states of Lanthanides?
5. Explain characteristics of solids?
6. Explain about immiscible liquid mixture?
7. Explain solubility product with examples?
8. Write short note on Abnormal Colligative properties.

SECTION-B

Answer any FIVE questions. Each question carries 10 marks. 5X10=50M

9. What are Inorganic Polymers and write comparisons between Inorganic and Organic polymers ?
10. Explain the structures of oxoacids of Sulpher ?
11. Explain stability of variable oxidation states of d-block elements.
12. Discuss about x-ray diffraction and crystal structure.
13. Explain Andrew's isotherms of carbon dioxide.
14. Write the differences between Liquid crystal and Solid/liquid.
15. Explain Nernst distribution law for associated molecules.
16. Explain experimental Cottrell's method?

The Guidelines to be followed by the question paper setters in chemistry for the
I-Semester - end exams ACADEMIC YEAR-2020-2021

SEMESTER-I	PAPER CODE : CHE-101C
PAPER TITLE : INORGANIC & PHYSICAL CHEMISTRY, PAPER - I	

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (25 Marks)	1	1 + 1
Unit-2 (25 Marks)	1+1+1	1
Unit-3 (25 Marks)	1	1+1
Unit-4 (25Marks)	1	1+1
Unit-5 (20Marks)	1+1	1

- Each Short answer question carries 5 marks in Section -A
- Each Essay question carries 10 marks in Section -B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per weightage given by us.

Simple Salt Analysis	PAPER CODE : CHE-101P
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Salt mixture Analysis

30 hrs (2h / w)

Credits: 2

Analysis of salt mixture containing two anions and two cations from the following.

Anions: Carbonate, acetate, chloride, bromide, nitrate, sulphate, borate, phosphate

Cations: Lead, copper, iron, aluminum, zinc, manganese, nickel, calcium, Strontium, barium, potassium and ammonium.

1. Analysis of simple salt-I
2. Analysis of simple salt-II
3. Analysis of simple salt-III
4. Analysis of simple salt-IV
5. Analysis of simple salt-V
6. Analysis of simple salt-VI

SCHEME OF VALUATION

INTERNAL MARKS

- Record =10 M

EXTERNAL MARKS (40)

- Viva questions = 10 M

PRACTICAL EXAMINATION (30M)

- Identification of anion 6M
- Confirmation test for anion 6 M
- Group separation table with correct group 10 M
- Confirmation test for cation 5M
- Report 3 M

TOTAL: 30 M

SEMESTER – III	SUBJECT: CHEMISTRY	PAPER CODE: CHE-301C
PAPER TITLE : INORGANIC, ORGANIC PHYSICAL CHEMISTRY, PAPER - III		

INORGANIC CHEMISTRY

60 hrs (4 h / w) Credits - 3

UNIT – I

Theories of bonding in metals:

- Metallic properties and its limitations, Valence bond theory, Free electron theory, Explanation of thermal and electrical conductivity of metals, limitations,
- Band theory, formation of bands, explanation of conductors, semiconductors and insulators.

UNIT – II

1. Metal carbonyls

- Effective atomic number(EAN), Calculation of EAN of metal atom.classification of metal carbonyls, structures and shapes of metal carbonyls of V, Cr, Mn, Fe, Co and Ni.

2. Organometallic Chemistry

- Definition - classification of Organometallic compounds - nomenclature, preparation and applications of alkyls of Li and Mg.

ORGANIC CHEMISTRY

UNIT-III

Carbonyl compounds

- Nomenclature of aliphatic and aromatic carbonyl compounds, structure of the carbonyl group. Synthesis of aldehydes from acid chlorides, synthesis of aldehydes and ketones using 1,3-dithianes, synthesis of ketones from nitriles and from carboxylic acids.
- **Physical properties:** Reactivity of carbonyl group in aldehydes and ketones.
- **Nucleophilic addition reaction** with a) NaHSO₃, b) HCN, c) RMgX, d) NH₂OH, e) PhNHNH₂, f) 2,4-DNPH, g) Alcohols-formation of hemiacetal and acetal.
- **Base catalysed reactions:** a) Aldol, b) Cannizzaro reaction, c) Perkin reaction, d) Benzoin condensation, e) Haloform reaction, f) Knoevenagel reaction.
- Oxidation of aldehydes- Baeyer-Villiger oxidation of ketones.
- **Reduction:** Clemmensen reduction, Wolf-Kishner reduction, MPV reduction, reduction with LiAlH₄ and NaBH₄.
- **Analysis of aldehydes and ketones** with a) 2,4-DNT test, b) Tollen's test, c) Fehling test, d) Schiff's test, e) Haloform test (with equation)

UNIT-IV

1. Carboxylic acids and derivatives

- Nomenclature, classification and structure of carboxylic acids. Methods of preparation by a) Hydrolysis of nitriles, amides
b) Hydrolysis of esters by acids and bases with mechanism
c) Carbonation of Grignard reagents.
- Special methods of preparation of aromatic acids by
a) Oxidation of side chain.
b) Hydrolysis by benzotrichlorides.
c) Kolbe reaction.
- **Physical properties:** Hydrogen bonding, dimeric association, acidity- strength of acids with examples of trimethyl acetic acid and trichloroacetic acid. Relative differences in the acidities of aromatic and aliphatic acids.
- **Chemical properties:** Reactions involving H, OH and COOH groups- salt formation, anhydride formation, acid chloride formation, amide formation and esterification(mechanism). Degradation of carboxylic acids by Huns-Diecker reaction, decarboxylation by Schimdt reaction, Arndt-Eistert synthesis, halogenation by Hell-Volhard- Zelinsky reaction.

2. Active methylene compounds

- **Acetoacetic esters:** keto-enol tautomerism, preparation by Claisen condensation, Acidhydrolysis and ketonic hydrolysis.
- Preparation of a) monocarboxylic acids(Acetic acid, Propaonic acid).
b) Dicarboxylic acids(Succinic acid, Adipic acid).C)Reaction with urea
- **Malonic ester:** preparation from acetic acid.
Synthetic applications: Preparation of a) monocarboxylic acids (propionic acid and n-butyric acid).
b) Dicarboxylic acids (succinic acid and adipic acid)
c) α,β -unsaturated carboxylic acids (crotonic acid).Reaction with urea.

PHYSICAL CHEMISTRY

UNIT-V

Dilute solutions

- Colligative properties. Raoult's law, relative lowering of vapour pressure, its relation to molecular weight of non-volatile solute. Experimental method-Ostwald method.
- Elevation of boiling point , Derivation of relation between molecular weight and elevation in boiling point, Experimental method –Cottrell's method
- Depression in freezing point. Derivation of relation between molecular weight and depression in freezing point, Experimental method – Beckmann's method.
- Osmosis, osmotic pressure, Determination of molecular weight of non-volatile solute from osmotic pressure. Experimental method-Berkeley-Hartley method. Abnormal Colligative properties- Van't Hoff factor.

List of Text Books

1. Selected topics in inorganic chemistry by W.D.Malik, G..D.Tuli,R.D.Madan
2. Inorganic Chemistry J E Huheey, E A Keiter and R L Keiter
3. A Text Book of Organic Chemistry by Bahl and Arun bahl
4. A Text Book of Organic chemistry by I L Finar Vol I
5. Telugu Academy Textbook of Chemistry Vol- II (English medium)
6. Unified chemistry Vol- II by O.P.Agarwal
7. Unified chemistry Vol- II by K.Ramarao and Y. R. Sharma (KalyaniPublishers)

List of Reference Books

1. Organic chemistry by Bruice
2. Organic chemistry by Clayden
3. Advanced Inorganic chemistry by Gurudeep Raj
4. Basic Inorganic Chemistry by Cotton and Wilkinson
5. Concise Inorganic Chemistry by J.D.Lee
6. Pradeep's chemistry vol- I & II

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYURU.
(Accredited at "A" Grade by NAAC, Bangalore)

SEMESTER – III	PAPER CODE : CHE-301C
PAPER TITLE : INORGANIC AND ORGANIC CHEMISTRY, PAPER-III	

Time: 3Hours

Maximum marks: 75

Pass marks: 30

SECTION-A

Answer any FIVE of the following. Each question carries 5 marks. 5X5=25

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

SECTION-B

Answer any FIVE questions. Each question carries 10 marks. 5X10=50

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

**The Guidelines to be followed by the question paper setters in chemistry for the
III- Semester - end exams**

SEMESTER – III	PAPER CODE : CHE-301C
PAPER TITLE : INORGANIC AND ORGANIC CHEMISTRY, PAPER-III	

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (25 Marks)	1	1 + 1
Unit-2 (20 Marks)	1 + 1	1
Unit-3 (30 Marks)	1 + 1	1+1
Unit-4 (15 Marks)	1	1
Unit-5 (30 Marks)	1 +1	1 + 1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

Organic qualitative analysis-I	PAPER CODE : CHE-301 P
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PRACTICAL SYLLABUS

30 hrs. (2h / w), Credits-2

Organic Qualitative Analysis: 50M

Analysis of an organic compound through systematic qualitative procedure for functional group identification including the determination of melting point and boiling point .

Alcohols, Phenols, Aldehydes, Ketones, ,Carboxylic acids,

SCHEME OF VALUATION

1. INTERNAL MARKS- Record-10M

2. EXTERNAL MARKS-40

- Analysis of an organic compound and preparation of suitable derivative-30M
- Viva questions = 10 M

TOTAL = 50 M

SEMESTER – V	SUBJECT: CHEMISTRY	COURSE CODE: CHE-501C	
PAPER TITLE : INORGANIC,ORGANIC & PHYSICAL CHEMISTRY, Paper –V			
		60 hrs(4h/w)	Credits-3

INORGANIC CHEMISTRY

UNIT – I

Coordination Chemistry: (10+10+5)

12h

IUPAC nomenclature - bonding theories - Review of Werner's theory and Sidgwick's Concept of coordination - Valence bond theory - geometries of coordination numbers 4-tetrahedral and square planar and 6-octahedral and its limitations, crystal field theory - Splitting of d-orbitals in octahedral, tetrahedral and square-planar complexes - low spin and high spin complexes - factors affecting crystal-field splitting energy, merits and demerits of crystal-field theory. Isomerism in coordination compounds - structural isomerism and stereo isomerism, stereochemistry of complexes with 4 and 6 coordination numbers

UNIT-II

1. Spectral and magnetic properties of metal complexes: (10+5)

5h

Types of magnetic behavior, spin-only formula, calculation of magnetic moments, experimental determination of magnetic susceptibility-Gouy method.

2. Stability of metal complexes: (10+5)

6h

Thermodynamic stability and kinetic stability, factors affecting the stability of metal complexes, chelate effect, determination of composition of complex by Job's method and mole ratio method.

ORGANIC CHEMISTRY

UNIT- III

Nitro hydrocarbons: (10+5)

5h

Nomenclature and classification-nitro hydrocarbons, structure -Tautomerism of nitroalkanes leading to aci and keto form, Preparation of Nitroalkanes, reactivity - halogenation, reaction with HONO (Nitrous acid), Nef reaction and Mannich reaction leading to Micheal addition and reduction.

UNIT – IV

Nitrogen compounds: (10+10+5)

16h

Amines (Aliphatic and Aromatic): Nomenclature, Classification into 1°, 2°, 3° Amines and Quarternary ammonium compounds. Preparative methods –
1. Ammonolysis of alkyl halides 2. Gabriel synthesis 3. Hoffman's bromamide reaction (mechanism).
Reduction of Amides and Schmidt reaction. Physical properties and basic character - Comparative basic strength of Ammonia, methyl amine, dimethyl amine, trimethyl amine and aniline - comparative basic strength of aniline, N-methylaniline and N,N-dimethyl aniline (in aqueous and non-aqueous medium), steric effects and substituent effects.

Chemical properties: a) Alkylation b) Acylation c) Carbylamine reaction d) Hinsberg separation e) Reaction with Nitrous acid of 1°, 2°, 3° (Aliphatic and aromatic amines). Electrophilic substitution of Aromatic amines – Bromination and Nitration. Oxidation of aryl and Tertiary amines, Diazotization.

PHYSICAL CHEMISTRY

UNIT- V

Thermodynamics (10+5+5+5)

16h

The first law of thermodynamics-statement, definition of internal energy and enthalpy. Heat capacities and their relationship. Joule-Thomson effect- coefficient. Calculation of w , for the expansion of perfect gas under isothermal and adiabatic conditions for reversible processes. State function. Temperature dependence of enthalpy of formation-Kirchoff's equation. Second law of thermodynamics. Different Statements of the law. Concept of entropy, entropy as a state function, entropy changes in reversible and irreversible processes. Entropy changes in spontaneous and equilibrium processes.

List of Reference Books

1. Concise coordination chemistry by Gopalan and Ramalingam
2. Coordination Chemistry by Basalo and Johnson
3. Organic Chemistry by G.Mare loudan, Purdue Univ
4. Advanced Physical Chemistry by
5. Text book of physical chemistry by S Glasstone
6. Concise Inorganic Chemistry by J.D.Lee
7. Advanced Inorganic Chemistry Vol-I by Satyaprakash, Tuli, Basu and Madan
8. A Text Book of Organic Chemistry by Bahl and Arun bahl
9. A Text Book of Organic chemistry by I L Finar Vol I
10. Advanced physical chemistry by Gurudeep Raj

SEMESTER – V	PAPER-V	PAPER CODE : CHE-501C
PAPER TITLE : INORGANIC,ORGANIC & PHYSICAL CHEMISTRY		

Time: 3Hours

Maximum marks: 75

Pass marks: 30

SECTION-A

Answer any FIVE of the following. Each question carries 5 marks. 5X5=25

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

SECTION-B

Answer any FIVE questions. Each question carries 10 marks. 5X10=50

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

**The Guidelines to be followed by the question paper setters in chemistry for the
V- Semester - end exams**

SEMESTER – V	SUBJECT: CHEMISTRY	COURSE CODE: CHE-501C
PAPER TITLE : INORGANIC,ORGANIC & PHYSICAL CHEMISTRY, Paper –V		

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (25 Marks)	1	1 + 1
Unit-2 (30 Marks)	1 + 1	1+1
Unit-3 (15 Marks)	1	1
Unit-4 (25 Marks)	1	1 + 1
Unit-5 (25 Marks)	1 +1+1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

PRACTICAL SYLLABUS

Practical Paper – V Organic Qualitative Analysis	PAPER CODE : CHE-501 P
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30 hrs (2 h/W) Credits: 2

Organic Qualitative Analysis: 50M

Analysis of an organic compound through systematic qualitative procedure for functional group identification including the determination of melting point and boiling point .

Alcohols, Phenols, Aldehydes, Ketones, Carbohydrates,
Carboxylic acids, Aromatic Primary Amines.

SCHEME OF VALUATION

1. INTERNAL MARKS- Record-10M

2. EXTERNAL MARKS-40

- Analysis of an organic compound and preparation of suitable derivative-30M
- Viva questions = 10 M

TOTAL = 50 M

SEMESTER – V	Paper – VI	SUBJECT: CHEMISTRY	PAPER CODE: CHE-502C
PAPER TITLE : INORGANIC,ORGANIC & PHYSICAL CHEMISTRY			
			60 hrs (4h/w) Credits-3

INORGANIC CHEMISTRY

UNIT-I

1. Reactivity of metal complexes: (10+5)

5h

Labile and inert complexes, ligand substitution reactions - SN^1 and SN^2 , substitution reactions of square planar complexes - Trans effect and applications of trans effect.

2. Bioinorganic chemistry: (10)

5h

Essential elements, biological significance of Na, K, Mg, Ca, Fe, Co, Ni, Cu, Zn and Cl-. Metalloporphyrins – Structure and functions of hemoglobin, Myoglobin and Chlorophyll.

ORGANIC CHEMISTRY

UNIT- II

Heterocyclic Compounds (10+5)

8h

Introduction and definition: Simple five membered ring compounds with one hetero atom
Ex. Furan. Thiophene and pyrrole - Aromatic character – Preparation from 1,4,-dicarbonyl compounds, Paul-Knorr synthesis.

Properties : Acidic character of pyrrole - electrophilic substitution at 2 or 5 position, Halogenation, Nitration and Sulphonation under mild conditions - Diels Alder reaction in furan.

Pyridine – Structure - Basicity - Aromaticity - Comparison with pyrrole - one method of preparation and properties - Reactivity towards Nucleophilic substitution reaction.

UNIT-III

Carbohydrates (10+5+5+5)

12h

Monosaccharides: **Glucose** (aldo hexose) - Evidence for cyclic structure of glucose (some negative aldehydes tests and mutarotation) - Proof for the ring size (methylation, hydrolysis and oxidation reactions) - Pyranose structure (Haworth formula and chair conformational formula).

Fructose (ketohexose) - Evidence of 2 - ketohexose structure (formation of pentaacetate, formation of cyanohydrin its hydrolysis and reduction by HI). Cyclic structure for fructose (Furanose structure and Haworth formula) - osazone formation from glucose and fructose – Definition of anomers with examples.

Interconversion of Monosaccharides: Aldopentose to Aldohexose (Arabinose to D- Glucose, D-Mannose) (Kiliani - Fischer method). Epimers, Epimerisation - Lobry de

bruyen van Ekenstein rearrangement. Aldohexose to Aldopentose (D-Glucose to D- Arabinose) by Ruff degradation. Aldohexose to Ketohexose [(+) Glucose to (-) Fructose] and Ketohexose to Aldohexose (Fructose to Glucose)

UNIT- IV

Amino acids and proteins (10+10+5)

12h

Introduction: Definition of Amino acids, classification of Amino acids into alpha, beta, and gamma amino acids. Natural and essential amino acids - definition and examples, classification of alpha amino acids into acidic, basic and neutral amino acids with examples. Methods of synthesis: General methods of synthesis of alpha amino acids (specific examples - Glycine, Alanine, valine and leucine) by following methods: a) from halogenated carboxylic acid b) Malonic ester synthesis c) strecker's synthesis.

Physical properties: Zwitter ion structure - salt like character - solubility, melting points, amphoteric character, definition of isoelectric point.

Chemical properties: General reactions due to amino and carboxyl groups - lactams from gamma and delta amino acids by heating peptide bond (amide linkage). Structure and nomenclature of peptides and proteins.

PHYSICAL CHEMISTRY

UNIT-V

1. Chemical kinetics (10+5)

9h

Rate of reaction - Definition of order and molecularity. Derivation of rate constants for first, second, third and zero order reactions and examples. Derivation for time half change. Methods to determine the order of reactions. Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.

2. Photochemistry (10+5)

9h

Difference between thermal and photochemical processes. Laws of photochemistry- Grothus-Draper's law and Stark-Einstein's law of photochemical equivalence. Quantum yield-Photochemical reaction mechanism- hydrogen- chlorine, hydrogen- bromine reaction. Qualitative description of fluorescence, phosphorescence, Photosensitized reactions- energy transfer processes (simple example)

List of Reference Books

1. Concise coordination chemistry by Gopalan and Ramalingam
2. Coordination Chemistry by Basalo and Johnson
3. Organic Chemistry by G.Mare loudan, Purdue Univ
4. Advanced Physical Chemistry by Atkins
5. Text book of physical chemistry by S Glasstone
7. Instrumentation and Techniques by Chatwal and Anand
8. Essentials of nano chemistry by pradeep
9. A Textbook of Physical Chemistry by Puri and Sharma
10. Advanced physical chemistry by Gurudeep Raj.

SEMESTER – V	PAPER-VI	PAPER CODE : CHE-502C
PAPER TITLE : INORGANIC,ORGANIC & PHYSICAL CHEMISTRY		

Time: 3Hours

Maximum marks: 75

Pass marks: 30

SECTION-A

Answer any FIVE of the following. Each question carries 5 marks. 5X5=25

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

SECTION-B

Answer any FIVE questions. Each question carries 10 marks. 5X10=50

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

**The Guidelines to be followed by the question paper setters in chemistry for the
V- Semester - end exams**

SEMESTER – V	SUBJECT: CHEMISTRY	PAPER CODE: CHE-502C
PAPER TITLE : INORGANIC,ORGANIC & PHYSICAL CHEMISTRY, Paper – VI		

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (25 Marks)	1	1 + 1
Unit-2 (15 Marks)	1	1
Unit-3 (25 Marks)	1 + 1+1	1
Unit-4 (25 Marks)	1	1 + 1
Unit-5 (30 Marks)	1 +1	1 + 1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYYURU.
(Accredited at "A" Grade by NAAC, Bangalore)**

PRACTICAL SYLLABUS

Practical Paper –VI Physical Chemistry	COURSE CODE : CHE-502 P
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30 hrs (2 h/W) Credits: 2

1. Determination of rate constant for acid catalyzed ester hydrolysis.
2. Determination of molecular status and partition coefficient of benzoic acid in Benzene and water.
3. Determination of Surface tension of liquid
4. Determination of Viscosity of liquid.
5. Adsorption of oxalic acid on silica gel , verification of Freundlich isotherm.

SCHEME OF VALUATION

1. INTERNAL MARKS- Record-10M
2. EXTERNAL MARKS-40
 - Practical-30
 - Viva-10

TOTAL = 50 M

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF COMMERCE

MINUTES OF BOARD OF STUDIES

ODD SEMESTER

15-07-2020

**Minutes of the meeting of Board of studies in Commerce for the Autonomous courses of
AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at
10.30 A.M on 15-7-2020 through CiscoWebex Meeting**

Dr. K.Venkateswarlu ... Presiding

Members Present:

- | | | |
|---|-----------------------|---|
| 1) <i>K.V.</i>
(Dr.K.Venkateswarlu) | Chairman | Head, Department of Commerce
AG & SG S Degree College of Arts & Science
Vuyyuru |
| 2) <i>R.Padma</i>
(Dr.R.Padmaja) | University
Nominee | Asst. Professor
Krishna University
Machilipatnam |
| 3) <i>K.Peddiraju</i>
(Dr.K.Peddiraju) | Subject expert | Lecturer in Commerce,
Govt. Degree College
Razole |
| 4) <i>G.Nagaraju</i>
(Dr.G.Nagaraju) | Subject expert | Lecturer in Commerce
Acharya Nagarjuna University
Guntur. |
| 5) <i>V.V. Punna Rao</i>
(Sri V.Punnarao) | Member | General Manager
K.C.P & IC Ltd
Vuyyuru. |
| 6) <i>Sri</i>
(Sri V.Balaji) | Member | Chartered Accountant
Managing Partner
Balaji V & Co
Vuyyuru |
| 7) <i>N.Vasanth Rao</i>
(Sri N.Vasantha Rao) | Member | Ad-hoc Lecturer in Commerce
AG & SG S Degree College of Arts & Science
Vuyyuru |
| 8) <i>V.Gopichand</i>
(Sri V.Gopichand) | Member | Ad-hoc Lecturer in Commerce
AG & SG S Degree College of Arts & Science
Vuyyuru |
| 9) <i>K.Sekhar Babu</i>
(Sri K.SekharBabu) | Member | Ad-hoc Lecturer in Commerce
AG & SG S Degree College of Arts & Science
Vuyyuru |
| 10) <i>A.N.L. Manohari</i>
(Ms A.N.L Manohari) | Member | Ad-hoc Lecturer in Commerce
AG & SG S Degree College of Arts & Science
Vuyyuru |

Agenda of B.O.S Meeting:

1. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Commerce for the 1st Semester as per the guidelines and instruction under CBCS prescribed by APSCHE from the Academic Year 2020-21.
2. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Commerce for the 3rd Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
3. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Commerce for the 5th Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
4. To recommend the Blue print of I, III & V Semesters of B.Com (General & Computers) for the Academic Year 2020-21.
5. To recommend the Teaching and Evaluation methods to be followed under CBCS
6. Any other suggestions regarding Certificate Course, Seminars, Workshops, Guest Lectures to be organized.
7. Any other matter.

RESOLUTIONS

1. Discussed and recommended the syllabi, Model Question Papers and Guidelines for question paper setters in Commerce for the 1st Semester of **I B.Com., (general & computer)** for the Academic year 2020-21. prescribed by APSCHE Business Environment paper is introduced
2. Discussed and recommended that no changes are required in syllabi, Model Question Papers and Guidelines for question paper setters in Commerce for the 3rd Semester of **II B.Com., (general & computer)** for the Academic year 2020-21.
3. Discussed and recommended that no changes are required in syllabi, but some minor changes are required in Model Question Papers and Guidelines for question paper setters in Commerce for the 5th Semester of **III B.Com., (general & computer)** for the Academic year 2020-21.
4. It is resolved to continue the same blue prints of I, III. & V Semesters of Degree B.Com (**general & computer**) for the Academic year 2020-21.
5. It is resolved to continue following Teaching and Evaluation methods for Academic year 2020-21.

6. It is resolved to Introduced Value Added Programme on Tally

7. Insurance Promotion (SDC) is introduced for I Semester

Teaching methods:

Besides the conventional methods of teaching, we use modern technology i.e. using of LCD projector, display on U boards etc, for better understanding of concepts.

Evaluation of a student is done by the following procedure:

Internal Assessment (IA) III B.Com (General & Computers)

- Out of maximum 100 marks in each paper 30 marks shall be allocated for internal assessment for III.B.Com and (General & Computers). Out of these 30 marks, 20 Marks are allocated for announced tests (i.e. IA-1 & IA-2). Two announced tests will be conducted and average of these two tests shall be deemed as the marks obtained by the student, 5 marks allocated on the basis of candidate's percentage of attendance and remaining 5 marks are allocated for the assignment. There is no minimum passing for IA.

Semester Examinations (SE)

- The Semester Examinations will be in the form of a comprehensive examination covering the entire syllabus in each subject. It will be of 3 hours duration, with maximum 70 marks, irrespective of the number of credits allotted to it.
- Even though the candidate is absent for two IA exams/obtained zero marks, the external marks are considered (if he/she gets 40/70) and the result shall be declared as 'PASS'.

- The pass mark shall be 28 out of 70 in the Semester end examination.
 - The maximum marks for each Paper shall be 100.(Internal 30 + External 70)
7. Discussed and recommended to organize certificate course online/offline, seminars, Guest lectures, Online Examinations and Workshops to upgrade the knowledge of students for Competitive Examinations for the approval of the Academic Council.
 8. It is resolved to follow further changes if any in the Syllabus by the Competent Authority



Chairman

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SEMESTER – I

SYLLABUS

Fundamentals of Accounting - I

Unit-I – Introduction to Accounting

Need for Accounting – Definition – Objectives, Advantages – Book keeping and Accounting– Accounting concepts and conventions - Accounting Cycle - Classification of Accounts and its rules - Double Entry Book-keeping - Journalization - Posting to Ledgers, Balancing of ledger Accounts (problems).

Unit –II: Subsidiary Books:

Types of Subsidiary Books - Cash Book, Three-column Cash Book- Petty cash Book (Problems).

Unit-III: Trail Balance and Rectification of Errors:

Preparation of Trail balance - Errors – Meaning – Types of Errors – Rectification of Errors (Problems)

Unit-IV- Bank Reconciliation Statement:

Need for bank reconciliation - Reasons for difference between Cash Book and Pass Book Balances- Preparation of Bank Reconciliation Statement- Problems on both favorable and unfavourable balances.

Unit -V: Final Accounts:

Preparation of Final Accounts: Trading account – Profit and Loss account – Balance Sheet – Final Accounts with adjustments (Problems).

Reference Books

1. T.S.Reddy & A. Murthy, Financial Accounting , Margham Publications
2. R L Gupta & V. K Gupta, Principles and Practice of Accounting, Sultan Chand & Sons
3. S.P. Jain & K.L Narang, Accountancy-I, Kalyani Publishers
4. Tulasian, Accountancy -I, Tata McGraw Hill Co.
5. V.K.Goyal, Financial Accounting, Excel Books.

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SEMESTER – I

Fundamentals of Accounting - I

Model Question Paper

Time: 3 hrs

Max. Marks:70

SECTION – A

I. Answer any TWO of the following

2X5=10

1. Distinguish between Book- keeping and Accounting?
2. State different types of Subsidiary books?
3. Explain different types of errors?
4. Explain the various reasons for preparation of Bank reconciliation statement?

SECTION – B

II. Answer any FOUR of the following

4X15=60

5. Explain accounting concepts and conventions?
6. Pass necessary entries and prepare ledger for the following

1. March 1st vishwanath started business with Rs.30, 000
2. March 2nd purchased machinery for Rs.5000
3. March 3rd purchased goods from madanlal for Rs.2500
4. March 3rd sold goods to giri for Rs.4000
5. March 4th purchased goods from jai for Rs.5000
6. March 6th sales Rs.5000
7. March 10th received interest from mukund Rs.2000
8. March 11th cash deposited at bank Rs.6000

9. March 14th paid to jai for final settlement Rs.2900

10. March 16th sold goods to Venkat Rs.4000

11. March 18th venkat paid Rs.3890 for final settlement

12. March 29th rent paid through cheque Rs.500

7. Enter the following transactions in a Three Column Cash Book:

2010 January :

01 Cash in hand Rs.14, 000; balance at bank Rs.5, 000

03 Cash sales Rs.6000

05 Paid Rs.7, 000 into bank

06 Received a cheque for Rs.700 from Suraj

08 Paid into bank Suraj's cheque Rs.700

10 Paid to Anurg by cheque Rs.980 in full settlement of

His account of Rs.1000

11 Withdrew from bank for office Rs.4, 000

12 Cash sales Rs.8,000

13 Received cheque from John for Rs.10,000 and lodged it into bank

For clearance

14 Paid commission to Ram by cheque Rs.500

15 John's cheque dishonored

29 Drew a cheque for Rs.800 for personal use.

31 Paid salaries by cheque Rs.1, 500 and by cash Rs.500

31 Bank charges Rs.20 and insurance premium Rs.520 as shown in Passbook

8. Prepare a Trial Balance from the following balances.

Capital	24,000
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Drawings	4,500
Purchases	20,000
Sales	30,500
Returns inwards	1,500
Salaries	12,200
Wages	1,550
Bad debts	1,100
Debtors	14,000
Creditors	10,000
Provision for doubtful debts	1,900
Cash	6,200
Insurance	700
Plant & Machinery	7,150
Bills payable	2,500
Furniture	5,000
Land and buildings	7,000
Outstanding wages	2,000
Interest received	2,000
Bank overdraft	4,000
Other short term liabilities	4,000

9. From the following particulars as certain the balance that would appear in the cash book of Brahmaji as at 31st December 2015, after making the necessary adjustments.

	Rs.
Overdraft as per pass book (31-12-15)	13,880

Interest on overdraft for six months ending	
31-12-15 (not yet entered in cash book)	240
Bank charges for the above period	
(Not yet entered in the cash book)	60
Cheques drawn but not cashed by the customers	
Prior to 31-12-15	2,300
Cheques paid in to the bank but not cleared	
Before 31-12-15	4,340
A bills receivable (discounted with the bank in	
November 2015) dishonoured debited in the passbook	1,000

10. From the following Trial Balance of Hari and additional information prepare Trading and Profit and Loss Account for the year ended 31st March, 2015 and a Balance Sheet as on that date:

TRIAL BALANCE as on 31st March, 2015

PARTICULARS	Dr.(Rs.)	Cr.(Rs.)
Capital	--	1,00,000
Furniture	20,000	--
Purchases	1,50,000	--
Debtors	2,00,000	--
Interest earned	--	4,000
Salaries	30,000	--
Sales	--	3,21,000
Purchase Returns	--	5,000
Wages	20,000	--
Rent	15,000	--
Sales Returns	10,000	--
Bad Debt Written off	7,000	--
Creditors	--	1,20,000
Drawings	24,000	--
Provision for Bad Debts	--	6,000
Printing & Stationery	8000	--
Insurance	12,000	--
Opening Stock	50,000	--
Office Expenses	12,000	--
Provision for Depreciation	--	2,000
Total	5,58,000	5,58,000

Adjustments:

(a) Depreciation Furniture by 10% on original cost

(b) A provision for doubtful 5% on Sundry Debtors

- (c) Salaries for the month of March, 2010 amounting to Rs.1000 were unpaid
- (d) Insurance amounting to Rs.2, 000 is prepaid
- (e) Stock used for private purpose Rs.6, 000
- (g) Closing stock Rs.60, 000

11. Prepare a Bank Reconciliation statement from the following details as on 31st March 2009 and find out the balance as per pass book.

- a) Balance as per cash book Rs. 1,000
- b) Cheques paid in but not cleared Rs. 200
- c) Cheques paid in but dishonoured Rs. 300
- d) Cheques drawn but not cashed Rs. 2,000
- e) Interest credited in Pass book only Rs. 100
- f) Bank charges Rs.150 entered in cash book Rs. 510
- g) Cash book overcast by Rs.500

12. Why are final accounts prepared?.

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SEMESTER – I

Fundamentals of Accounting - I

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Introduction to Accounting	Subsidiary Books	Trial balance & Rectification of Errors	Bank Reconciliation statement	Final Accounts
5 Marks questions	1	1	1	1	---
15 Marks questions	1T+1P	1P	1P	2P	1T+1P
Weight age	35	20	20	35	30

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SEMESTER – I

SYLLABUS

Business Organization and Management

Unit-I: Introduction: Concepts of Business, Trade , Industry and Commerce – Features of Business - Trade Classification - Aids to Trade – Industry – Classification – Relationship among Trade, Industry and Commerce.

Unit-II: Forms of Business Organizations: Forms of Business Organization: Sole Proprietorship, Joint Hindu Family Firm, Partnership firm, Joint Stock Company, Cooperative Society

Unit-III: Company Incorporation: Preparation of important Documents for incorporation of Company – Memorandum of Association – Articles of Association – Differences Between Memorandum of Association and Articles of Association - Prospectus and its contents –

Unit-IV: Management: Process of Management Planning; Decision-making; Fayol's 14 Principles of Management, Administration VS Management

Unit-V: Functional Areas of Management: Production - Manufacturing - Make in India - Marketing Management: Marketing Concept; Marketing Mix; Product Life Cycle; Pricing Policies and Practices.

Reference Books:

1. Kaul, V.K., Business Organization and Management, Pearson Education, New Delhi.
2. Chhabra, T.N., Business Organization and Management, Sun India Publications, New Delhi.
3. Koontz and Weihrich, Essentials of Management, McGraw Hill Education.
4. Basu, C. R., Business Organization and Management, McGraw Hill Education.
5. Jim, Barry, John Chandler, Heather Clark; Organization and Management, Cengage Learning.
6. Allen, L.A., Management and Organization; McGraw Hill, New York.

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SEMESTER – I
MODEL PAPER

Business Organization and Management

Time: 3 hrs
SECTION - A

Max. Marks: 70

I. Answer any TWO of the following

2X 5 = 10

1. Comparison between business, profession and Employment.
2. Explain the partnership deed?
3. Write about Prospectus.
4. Administration VS Management

SECTION - B

II. Answer any FOUR of the following

4 X 15= 60

5. Define business and explain the features of business.
6. Write the advantages and disadvantages of Sole Trading.
7. Distinguish between Public limited company and private limited company
8. Write about Memorandum of Association
9. Define Planning and Explain its Characteristics
10. Explain HenryFayol's Principles of Management
11. What are the required Documents for in-corporation of Company
12. Write the functions of marketing management

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SEMESTER – I

Business Organization and Management

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
5Marks Questions	1	1	1	1	-----
15 Marks Questions	1	2	2	2	1
Weight age	20	35	35	35	15

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SEMESTER – I SYLLABUS

Business Environment

Unit-I: Overview of Business Environment

Business Environment – Meaning – Macro and Micro Dimensions of Business Environment – Economic – Political – Social – Technological – Legal – Ecological – Cultural – Demographic – Changing Scenario and implications – Indian Perspective – Global perspective

Unit-II: Economic Growth

Meaning of Economic growth – Factors Influencing Development – Balanced Regional Development.

Unit-III: Development and Planning

Rostow's stages of economic development - Meaning – Types of plans – Main objects of planning in India – NITI Ayog and National Development Council – Five year plans.

Unit-IV;Economic Policies

Economic Reforms and New Economic Policy – New Industrial Policy – Competition Law – Fiscal Policy – Objectives and Limitations – Union budget – Structure and importance of Union budget – Monetary policy and RBI.

Unit-V : Social, Political and Legal Environment

Concept of Social Justice - Schemes - Political Stability - Legal Changes.

Suggested Readings:

- 1 Rosy Joshi and Sangam Kapoor : Business Environment.
- 2 Francis Cherunilam : Business Environment.
- 3 S.K. Mishra and V.K. Puri : Economic Environment of Business.

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SEMESTER – I

Business Environment

MODEL PAPER

Time: 3 hrs

Max. Marks: 70

SECTION - A

I. Answer any TWO of the following

2 X 5 = 10

1. What is meant by Business Environment? And explain the Importance of Business Environment?
2. Explain the concept of Economic Growth
3. What are the types of planning?
4. Explain the objectives of Fiscal policy?

SECTION - B

II. Answer any FOUR of the following

4 X 15 = 60

5. Explain the Macro and Micro Dimensions of Business Environment
6. Explain the factors influencing Economic development?
7. Review the progress of five year plans in India?
8. What are the Rostow's stages of Economic development?
9. Explain new Industrial policy in India?
10. What is meant by Budget? And state the importance of union budget and what are the Important aspects in union budget?
11. Explain the causes for region imbalances?
12. Explain different Government schemes about social welfare?

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SEMESTER – I

Business Environment

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
5Marks Questions	1	1	1	1	-----
15Marks Questions	1	2	2	2	1
Weight age	20	35	35	35	15

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Commerce	CIP-102G/C C	2020-2021	I.B.Com(gen&comp)
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SEMESTER –I

SYLLABUS:

INSURANCE PROMOTION
Skill Development Course

Unit-I: Introduction of Insurance - Types of insurances. Growth of Insurance sector in India - Regulatory mechanism (IRDA) - Its functions

Unit-II: Life Insurance plans. Health insurance plans. Products and features. Contents of documents– Sales Promotion methods - Finding prospective customers –Counselling – Helping customers in filing - Extending post-insurance service to customers.

Unit- III : General Insurance - It's products (Motor, Marine, Machinery, Fire, Travel and Transportation) and features. Contents of documents. Dealing with customers – Explaining Products to Customers - Promoting Customer loyalty. Maintenance of Records.

Reference books:

- 1. Principles of Insurance, Himalaya publishing House**
- 2. Principles and Practice of Insurance,**
- 3. Fundamentals of insurance,**
- 4. Life and General Insurance Management,**
- 5. Financial services, Tata McGraw hill**
- 6. Insurance Principles and Practices, Sultan Chand & Son**

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SEMESTER -I

Model Paper

INSURANCE PROMOTION
Skill Development Course

DURATION: 2 HOURS

SECTION – A Max:50

ANSWER ANY FOUR OF THE FOLLOWING QUESTIONS

(4x5=20M)

- 1. Define Insurance?**
- 2. Explain about IRDA**
- 3. Endowment plan**
- 4. What are the advantages of Health Insurance.**
- 5. Write about Sales Promotion methods**
- 6. Reserve for unexpired risks.**
- 7. What is marine Insurance**
- 8. Customer loyalty**

SECTION – B

ANSWER ANY THREE OF THE FOLLOWING QUESTIONS

(3x10=30M)

- 9. Explain different types of Insurance?**
- 10. What are the differences between General insurance and life insurance?**
- 11. What are the differences between Endowment policies and Term policies.**
- 12. Explain post insurance services to customer.**
- 13. What are the features of General insurance?**
- 14. Explain different types of General insurance.**

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SEMESTER -I

Guidelines

INSURANCE PROMOTION
Skill Development Course

Marks	UNIT-I	UNIT-II	UNIT-III
	Introduction of Insurance	Life Insurance plans.	General Insurance
5Marks	2	3	3
10Marks	2	2	2
Weight age	30	35	35

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SEMESTER –III

SYLLABUS

Corporate Accounting

Unit -I:

Accounting for Share Capital - Issue, forfeiture and reissue of forfeited shares- concept & process of book building - Issue of rights and bonus shares - Buyback of shares (preparation of Journal and Ledger).

Unit-II:

Profits prior to incorporation -Nature –need- ascertainment - treatment of profit /loss.(Including problems).

Unit –III:

Valuation of Goodwill and Shares: Need and methods - Normal Profit Method, Super Profits Method – Capitalization Method - Valuation of shares - Need for Valuation – Methods of Valuation - Net assets method, Yield basis method, Fair value method (including problems).

UNIT – IV:

Company Final Accounts: Preparation of Final Accounts – Adjustments relating to preparation of final accounts – Profit and loss account and balance sheet – Preparation of final accounts (including problems).

Unit –V

Provisions of the Companies Act, 2013 relating to issues of shares and debentures - Book Building- Preparation of Balance Sheet and Profit and Loss Account – Schedule-III.

Reference Books:

1. Corporate Accounting – Haneef & Mukherji,
2. Corporate Accounting – RL Gupta & Radha swami
3. Corporate Accounting – P.C. Tulsian

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SEMESTER –III

Corporate Accounting

Model Question Paper

Time: 3 hours

Max. Marks: 70

SECTION - A

I. Answer any TWO of the following questions

2 x 5 =10M

1. Explain the re-issue of Forfeited shares
2. How do you Ascertain Profits Prior to in Corporation.
3. What are the factors considered while calculating goodwill?
4. Book building

SECTION - B

II. Answer any FOUR of the following questions

4 x15 =60M

5. Chandana Co. Ltd. Offered to pay the public 40,000 equity shares of rs.100 each at a premium of Rs.10 per share .The payment was as follows.

Rs.

On Application	20
On Allotment	40 (including premium)
On first call	25
On final call	25

Applications received total for 70,000 shares, applications for 20,000, shares were rejected. The directors made both the calls. One share holder holding 1,000 shares failed to pay the two calls as a consequent his shares were forfeited.400 of these shares were reissued as fully paid at Rs.80 per share. Pass journal entries and prepare balance sheet on the basis of information given above.

6 A limited company purchased a business on 1st April 2012. The company obtained certificate of commence business on 31st July 2012. Following particulars are given for the year ending 31st March 2013, ascertain profit prior to incorporation and divisible profits.

- Total sales up to 30st March 2013 Rs.10,00,000. sales from 1st April 2012 to 31st July 2012 Rs.2,50,000
- Gross profit for the year Rs.2, 12,000
- Expenses debited to profit and loss account

Particulars	Rs.	Particulars	Rs.
Rent	6,000	Depreciation on machinery	30,000
Insurance	1,500	Commission on sales	12,600
Salaries	27,000	Bad debts (Rs.850 related to prior to incorporation)	2400
Selling expenses	9,000	General expenses	4800
Advertisement	8000	Directors fees	2600
Interest on Debentures	4,000	Preliminary expenses	7200
Audit fees	1,200	Interest paid to vendors	
Printing and Stationery	5,000 up to 1 st Sept. 2012		4,200

7. A business concern had earned profits for the past 3 years as follows

2007 –Rs50, 000 2008-Rs, 60, 000, 2009 –Rs70000.

Average capital employed in the business Rs.4, 00,000.

Reasonable rate of return expected in a similar business is 10%

From the above, calculate the value of goodwill under,

- 2 years purchase of the average profits of last three years
- four years purchase of super profits the basis of average profits of previous three years

8. The Balance sheet of Deepak Ltd. as on 31.03.2014 was as under.

Liabilities.	Rs.	Assets.	Rs.
4,000 Equity shares of Rs.100 each	4,00,000	Land and buildings	2,50,000
General Reserve	50,000	Machinery	1,20,000
Profit and loss Account	50,000	Investment at cost (market value Rs.60,000)	70,000
Creditors	90,000	Debtors	100,000
Provision for taxation	40,000	Stock	80,000
		Cash at bank	10,000
	6,30,000		6,30,000

Additional Information:

- a) Land and Buildings and machinery are valued at Rs.2,40,000 and Rs.95,000
- b) Of the total debtors Rs.5, 000 are bad.
- c) Good will is to be taken at Rs.50, 000
- d) The normal rate of dividend declared by such type of companies is 15% on paid up capital
- e) The average rate of dividend declared and paid by this company is 20% on its paid up capital. Calculate fair value of equity shares

9.The following Trial Balance has been extracted from the book of XYZ LTD .as on 31st march2014. You are required to prepare profit and loss Account and Balance sheet as on the date.

Debit Balance.	Rs.	Credit Balance	Rs.
Land and Buildings	34,000	Share capital	1,00,000
Furniture	6,000	General reserve	5,000
Plant &Machinery	15,000	10%debentures	40,000
Stock on 31 st March 2001	75,000	Sundry Creditors	4,000
Salaries	25,000	Gross profit	75,000
Debtors	10,000	Interest on investments	1,000
5% Investments	20,000	Profit and loss Account-1 ST April	35,000
Bank	5,000		
Advance Income tax	2,000		
Debentures interest	2,000		
Directors fee	7,000		
Rent ,rates and insurance	24,000		
Good will	35,000		
	2,60,000		2,60,000

1. Depreciate the following assets

Land and Buildings at 10% P.a. Plant and Machinery 8% P.a.

2. Provision for bad debts at6%.

3. The Director have recommended

(a) Transfer .Rs 3,000 to General Reserve Account.

(b)Equity dividend at 10% on the paid up capital.

(c)Provision for income tax for Rs 4,000.

10. Rajan Ltd. has the following items in the balance sheet

- (a) 1,00,000 Equity shares of Rs. 50 each Rs.40 each
- (b) General Reserves Rs.11,00,000
- (c) Share Premium Rs.5,00,000
- (d) Capital Reserve Rs.7,00,000

The company decided

1. To capitalise its general reserve
2. To convert the existing shares into fully paid up
- 3 To issue 20,000 bonus shares of Rs.50 each at a premium of Rs.10 per share out of share premium and Capital Reserve

Pass journal entries in the books of the company

11. What is a Share? Explain different types of Shares?
12. Explain the legal provisions relating to issue of Shares as per Companies Act 2013

Commerce	CCA-301G/C C	2020-2021	II.B.Com(gen/comp)
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SEMESTER –III

Corporate Accounting

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Accounting for Share Capital	Profits prior to incorporation	Valuation of Goodwill and Shares:	Company Final Accounts:	Provisions of the Companies Act, 2013
5Marks	1	1	1	0	1
15Marks	1T+2P	1P	2P	1P	1T
Weight age	50	20	35	15	20

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SEMESTER –III

SYLLABUS

Business Statistics

Unit 1: Introduction to Statistics:

Definition, importance and limitations of statistics - Collection of data - Schedule and questionnaire–Frequency distribution – Tabulation -Diagrammatic and graphic presentation of data.

Unit 2: Measures of Central Tendency:

Characteristics of measures of Central Tendency-Types of Averages – Arithmetic Mean, Geometric Mean, Harmonic Mean, Median, Mode, Deciles, Percentiles, Properties of averages and their applications.

Unit 3: Measures of dispersion and Skewness:

Properties of dispersion-Range-Quartile Deviation –Mean Deviation-Standard Deviation-Coefficient of Variation-Skewness definition-Karl Pearson’s and Bowley’s Measures of skewness.

Unit 4: Measures of Relation:

Meaning and use of correlation – Types of correlation-Karlpearson’s correlation coefficient –Spearman’s Rank correlation-probable error

Unit 5: Analysis of Time Series & Index Numbers:

Components of Time series- Measurement of trend and Seasonal Variations – Index Numbers-Methods of Construction of Index Numbers – Price Index Numbers – Quantity Index Numbers –Tests of Adequacy of Index Numbers – Cost of Index Numbers-Limitations of Index Numbers

Suggested Readings:

1. Business Statistics Reddy, C.R Deep Publications.
2. Statistics-Problems and Solutions Kapoor V.K.

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Business Statistics

Model Question Paper

Time: 3 hours

Max. Marks: 70

SECTION - A

I. Answer any TWO of the following questions

2 × 5 = 10 M

1. Explain the characteristics of Statistics.
2. What are the Required essential of a Good average
3. What is meant by Correlation?
4. Explain the features of Index Numbers?

SECTION - B

II. Answer any FOUR of the following

4 × 15 = 60 M

5. Explain the characteristics of a good average
6. Calculate Geometric Mean.

C.I	10-20	20-30	30-40	40-50	50-60	60-70
F	4	7	16	20	15	8

7. Calculate Mean deviation.

C.I	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
F	8	10	12	15	10	7	8	5

8. Calculate Bowley's Skewness

X	6	12	18	24	20	16	6
F	4	7	9	18	15	10	5

9. Construct a Histogram.

Marks	325-350	350-375	375-400	400-425	425-450
No.of students	30	45	75	60	35

10. Calculate Karl Pearson's coefficient of correlation from the following.

A	44	80	76	48	52	72	68	56	60
B	48	75	54	60	63	69	72	51	57

11. From the following given data compute trend line by method of Least Squares.

Years (X)	2003	2004	2005	2006	2007
Y	4	11	17	20	26

12. From the following data given Find fishers Index Number.

Commodity	Base year		Current year	
	Price	Quantity	Price	Quantity
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24
E	8	40	12	36

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SEMESTER -III

Business Statistics

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Introduction to Statistics	Measures of Central Tendency	Measures of dispersion and Skewness	Measures of Relation	Analysis of Time Series & Index Numbers
5Marks	1	1	0	1	1
15Marks	1P	1P+1T	2P	1P	2P
Weight age	20	35	30	20	35

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SEMESTER –III

SYLLABUS

Banking Theory & Practice

Unit-I: Introduction

Meaning & Definition of Bank – Functions of Commercial Banks – Kinds of Banks -Central Banking Vs. Commercial Banking.

Unit-II: Banking Systems

Unit Banking , Branch Banking, Investment Banking- Innovations in banking – e-banking - Online and Offshore Banking , Internet Banking - Anywhere Banking - ATMs- RTGS.

Unit-III: Banking Development

Indigenous Banking - Cooperative Banks, Regional Rural banks, SIDBI, NABARD -EXIM Bank.

Unit-IV: Banker and Customer

Meaning and Definition of Banker and customer – Types of Customers - General Relationship and Special Relationship between Banker and Customer - KYC Norms.

Unit-V: Collecting Banker and Paying Banker

Concepts - Duties & Responsibilities of Collecting Banker – Holder for Value – Holder in Due Course – Statutory Protection to Collecting Banker - Responsibilities of Paying Banker - Payment Gateways.

Books for Reference

1. Banking Theory: Law &Practice : K P M Sundram and V L Varsheney
2. Banking Theory, Law and Practice : B. Santhanam; Margam Publications
3. Banking and Financial Systems : Aryasri
4. Introduction to Banking : Vijaya Raghavan
5. Indian Financial System : M.Y.Khan
6. Indian Financial System : Murthy & Venugopal

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SEMESTER –III

BANKING THEORY& PRACTICE

Model Question Paper

Time: 3 hrs

Max. Marks: 70

SECTION- A

I. Answer any TWO of the following questions

2 x 5= 10M

1. Industrial Bank
2. Offshore banking
3. Regional Rural Bank
4. KYC Norms

SECTION- B

II. Answer any FOUR of the following questions

4 x 15 = 60M

5. Describe the functions of commercial banks.
6. What are the various weapons of credit control available to R.B.I
7. Discuss the recent trends and innovations in banking system?
8. Elucidate the Merits and demerits of Branch Banking?
9. What are the functions of NABARD?
10. What are the special features of relationship between banker and customer?
11. Discuss in detail the statutory protection granted to a collecting banker in India
12. Discuss the duties and liabilities of a paying banker.

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SEMESTER –III

BANKING THEORY& PRACTICE

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Introduction	Banking Systems	Banking Development	Banker and Customer	Collecting Banker and Paying Banker
5Marks	1	1	1	1	0
15Marks	2	2	1	1	2
Weight age	35	35	20	20	30

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SEMESTER –V

SYLLABUS

Business Leadership

Unit-I: Introductory: Leadership - Traits, Skills and Styles- Leadership Development - Qualities of a Good Leader.

Unit-II: Decision-Making and Leadership: Leadership for Sustainability - Power, Influence, Impact - Leadership Practices - Organizations and Groups: Organizational Culture and Leadership - Leadership in Business Organizations

Unit-III: Special Topics: Profiles of a few Inspirational Leaders in Business – Jemshedji Tata - Aditya Birla - Swaraj Paul - L N Mittal - N R Narayana Murthy - Azim Premji, etc.

References:

1. Northouse, Peter G., Leadership: Theory and Practice, Sage Publications.
2. Daloz Parks, S., Leadership can be taught: A Bold Approach for a Complex World, Boston: Harvard Business School Press.
3. Drucker Foundation (Ed.), Leading Beyond the Walls, San Francisco: Jossey Bass.
4. Al Gini and Ronald M. Green, Virtues of Outstanding Leaders: Leadership and Character, John Wiley & Sons Inc.
5. S Balasubramanian, The Art of Business Leadership – Indian Experiences, Sage Publications

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SEMESTER –V

Model paper

Business Leadership

Time: 2 hrs

Max. Marks: 50

SECTION- A

I. Answer any FOUR of the following questions

4 x 5= 20M

1. Leadership
2. Trait
3. Power
4. Influence
5. Aditya Birla
6. Azim Premji

SECTION- B

II. Answer any THREE of the following questions

3 x 10 = 30M

7. Explain the qualities of Good leader
8. Explain Different types of leader ship Practices

	UNIT-I	UNIT-II	UNIT-III
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9. Explain the leadership in Business Organizations
10. Explain the Profiles of Jemshedji Tata
11. Explain the different Styles of Leadership
12. Explain the Profiles of Narayana Murthy

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SEMESTER -V

Business Leadership

Guidelines to the paper setter

	Introduction	Decision making and Leadership	Special Topics
5 Marks questions	2	2	2
10 Marks questions	2	2	2
Weight age	30	30	30

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SEMESTER -V

SYLLABUS

Cost Accounting

Unit-I:Introduction: Distinguish between Financial Accounting, Cost Accounting and management accounting - Cost Concepts and Classification – Cost Centre and Cost Unit – Preparation of Cost Sheet.

Unit-II: Elements of Cost: Materials: Material control – Selective control, ABC technique – Methods of pricing issues – FIFO, LIFO, Weighted average, Base stock methods, choice of method(including problems).

Unit-III: Labour and Overheads: Labour: Control of labour costs – time keeping and time booking – Idle time –Methods of remuneration – labour incentives schemes - Overheads: Allocation and apportionment of overheads – Machine hour rate.

Unit-IV: Methods of Costing: Job costing – Process costing - treatment of normal and abnormal process losses – preparation of process cost accounts – treatment of waste and scrap, joint products and by products (including problems).

Unit -V: Costing Techniques: Marginal Costing – Standard costing – Variance Analysis (including problems).

References:

1. S.P. Jain and K.L. Narang – Advanced Cost Accounting, Kalyani Publishers, Ludhiana.
2. M.N. Aurora – A test book of Cost Accounting, Vikas Publishing House Pvt. Ltd.
3. S.P. Iyengar – Cost Accounting, Sultan Chand & Sons.
4. Nigam & Sharma – Cost Accounting Principles and Applications, S.Chand & Sons.
5. S.N .Maheswari – Principles of Management Accounting.
6. I.M .Pandey – Management Accounting, Vikas Publishing House Pvt. Ltd.

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SEMESTER –V

Model paper

Cost Accounting

TIME -3hrs

SECTION-A

Max. Marks: 70

I. Answer any TWO of the following:

2x5=10M

1. Define Cost Accounting? Explain its Advantages.
2. Explain about FIFO Method .
3. What are the essential features of a good wage system?
4. Explain about BEP Analysis.

SECTION-B

II. Answer any FOUR of the following:

4x15=60M

5. Distinguish between cost accounting and financial accounting

6. From the following particulars you are required to prepare a cost sheet for the year ending 31.12.2009.

	Rs.
Stock of finished goods 31-12-2008	72,800.
Stock of raw materials on 31-12-2008	33,280.
Purchase of raw materials	7,59,200.
Wages	5,16,880.
Sales	15,39,200.
Stock of finished goods on 31-12-2009	78,000.
Stock of Raw materials on 31-12-2009	35,360
Works overhead charges	1,29,220
Office overheads	70,161

The company is intending to send a quotation for a large plant. The estimated material cost is Rs. 52,000 and wages Rs. 31,200. The quotation is to make a profit of 20% on selling price. Show the amount of quotation price.

7. X Ltd has purchased and issued the material in the following order

Jan	1	Purchased	300 units @Rs.3/-per units
	4	purchased	600 units@Rs.4/-per units
	6	Issue	500 units
	10	Purchased	700 units@Rs.4/ per units
	15	Issue	800 units
	20.	purchased	300 units @Rs.5/per units
	23.	issue	100 units

Ascertain the quantity of closing stock as on 31st January and state what will be its value (in each case) if issues are made under the First in first out method:

8. From the following information relating to a worker. Calculate which of the following methods of wage payment is beneficial to the worker:

- (a) Time rate
- (b) Piece rate
- (c) Halsey plan.
 - (I) Standard Time in a week 45 hrs
 - (ii) Standard weekly production 450 units.
 - (III) Actual time taken by the worker 40hrs.
 - (iv) Piece rate Rs.2 per units
 - (v) Hourly rate Rs.25.

9. Product x is obtained after it is processed through three distinct process. The following cost information is available for the operations:

particulars	Total	I	II	III
Material	5,625	2,600	2,000	1,025
Direct wages	7,330	2,250	3,680	1,400
Production over heads	7,330	—	—	—

500 units at Rs.4per unit were introduced in process .production over head to be distributed at 100% on Direct wages

The actual output and normal loss of the respective processes are:

	Output unit	Normal loss on input	Value of scrap per unit
Process-I	450	10%	Rs.2
Process-II	340	20%	Rs.4

Process-III	270	25%	Rs.5
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There is no stock or work-in-progress in any process.

Prepare process accounts.

10. From the following information pertaining to the two years, calculate.

(a) P/V ratio

(b) Amount of sales to earn profit of Rs40,000

(c) profit on sales Rs.1,20,000.

Years	Sales	Profit
1996	1,40,000	15,000
1997	1,60,000	20,000

11. You are required to calculate from the following data:

(a) Material price variance

(b) Material cost variance

(c) Material usage variance

Standard material cost to produce one tone of chemical "P" is

500 kg of material X @Rs.15 per kg.

750 kg of material Y @Rs.10 per kg.

1000 kg of material Z @Rs.12 per kg.

During the period 100 tons of Chemical P were produced from the usage of

6000 kg of material X@Rs.14 per kg.

8000 kg material Y @Rs .12 per kg.

10,500 kg materialZ@Rs.15 per kg.

12. The Costing records of Gopi Engineering Company for job 777 reveals Materials Rs 6,015

Wages: Dept .X : 100 Hours @ Rs 4.50 per hour

Dept .Y : 65 Hours @ Rs 3.00 per hour

Dept .Z : 35 Hours @ Rs 7.50 per hour

Over head expenses for these three departments were estimated as follows.

Variable overheads :

Dept .X : Rs 10,000 for 2,500 labour hours

Dept .Y Rs 6,000 for 2,000 labour hours

Dept .Z : Rs 4,000 for 500 labour hours

Fixed overheads: estimated at Rs 40,000 for 10,000 Normal Working Hours .you are required to calculate the cost of job No 777.

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Cost Accounting

SEMESTER –V

Guidelines to the paper setter

	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Introduction	Elements of Cost	Labour and Over heads	Methods of Costing	Costing Techniques
5 Marks questions	1	1	1	0	1
15 Marks questions	2(1T+1P)	1	1	2	2
Weight age	35	20	20	30	35

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SEMESTER –V

*TAXATION
SYLLABUS*

Unit-I: Introduction: Objectives - Principles of Taxation - Brief History - Basic Concepts; Capitaland Revenue; Basis of Charge - Exempted Incomes - Residential Status – Incidence of Taxation.

Unit-II: Direct and Indirect Taxes – Service Tax – VAT – Central Sales Tax – Latest Developments.

Unit-III: Computation of income under different heads: Income from Salary; Income from HouseProperty; Deductions u/s 80C to 80U - Income from Capital Gains; Income from Other Sources(simples problems).

Unit-IV: Taxation System in India: Objectives; Tax Holiday; Modes of Tax Recovery (Section 190 and 202); Payments and Refunds; Filing of Returns.

Unit-V: Tax Planning: Tax Avoidance and Tax Evasion; Penalties and Prosecutions; Income TaxAuthorities.

References:

1. Vinod K. Singhania Direct Taxes - Law and Practice, Taxman Publication.
2. B.B. Lal: Direct Taxes, Konark Publisher (P) Ltd.
3. Bhagwati Prasad: Direct Taxes – Law and Practice, Wishwa Prakashan.
4. Dr. Mehrotra and Goyal: Direct Taxes – Law and Practice, Sahitya Bhavan Publication.

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SEMESTER –V

TAXATION
Model Question Paper

Time: 3 Hrs

Max. Marks: 70

SECTION – A

I. Answer any TWO of the following

2X 5 = 10M

1. Explain the principle of Taxation
2. What is VAT
3. U/S 80c
4. Tax Evasion

SECTION – B

II. Answer any Four of the following

4 x15 =60M

5. Give 10 Examples of Incomes Exempted u/s 10.
6. What is Service tax ? Explain different taxable service
7. From the following particulars of sriram, a manger of a firm, compute his taxable income from salary for the A.Y 2017-18
 - a) Basic pay Rs 6000 P.M
 - b) Dearness allowance Rs 400 P.M
 - c) Own contribution to R.P.F Rs 3000 P.M
 - d)Employee's contribution to R.P.F Rs 3000 P.M
 - e) Interested credited to R.P.F 13% P.A Rs 4680
 - f) House rent allowance Rs 7200P.M rent paid in Delhi Rs5000 P.M
 - g) Medical allowance Rs100 P.M
 - h) Entertainment allowance Rs. 300 P.M

8. Compute income from House property for the assessment year 2016-17
Municipal valuation 16,000 P A. Fair rent 1,80,000 P.A ,Standard rent 1,50,000 P.A , Rent received 1,72,000 P A Municipal taxes 10% Municipal taxes are borne by the owner. Fire insurance Rs 3000, Interest on money borrowed for construction of House property paid Rs .36, 000 The House is let-out throughout the previous year.

9. Mr. Prasad submits the following particulars about sale of assets during 2016-17.

<u>Particulars</u>	<u>JewelleryPlot Gold</u>		
Sale Price	12, 00,000	50, 80,000	10,20,000
Expenses on sale	10,000	36,000	Nil
Cost of Acquisition	90,000	4, 20,000	1,30,000
Year of Acquisition	1989-90	1986-87	2003-04
CII	172	140	463

He has purchased a house for Rs.27, 00,000 on 1-3-2017.

Calculate the amount of taxable capital gain. CII for 2016-17 is:272

10 .Explain the Modes of Tax Recovery

11. Difference between Tax Planning and Tax Evasion

12. Mention the different Kinds of Incomes Specifically mentioned as Chargeable to tax under the head "Income from Other Sources

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
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SEMESTER –V

TAXATION
Guidelines to the paper setter

	Introduction	Direct and Indirect taxes	Computation of income under different heads	Taxation System in India	Tax Planning
5Marks	1	1	1	0	1
15Marks	1T	1T	3P+1T	1T	1T
Weight age	20	20	65	15	20

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SEMESTER –V

GOODS &SERVICE TAX FUNDAMENTALS

SYLLABUS

GOODS &SERVICE TAX FUNDAMENTALS

Unit I:Introduction: Overview of GST - Concepts – Limitations of VAT – Need for Tax Reforms - Justification for introduction of GST - Shortcomings and advantages at the Central Level and State Level on introduction of GST - Process of Introduction of GST - Constitutional Amendments.

Unit II: GST:Principles – Models of GST: Austrian, Canadian, Kelkar-Shah – BagchiPoddar -Comprehensive structure of GST model in India: Single, Dual GST– Transactions covered under GST.

Unit-III:Taxes and Duties: Subsumed under GST - Taxes and Duties outside the purview of GST: Tax on items containing Alcohol – Tax on Petroleum products - Tax on Tobacco products - Taxation of Services

Unit-IV: Inter-State Goods and Services Tax: Major advantages of IGST Model – Interstate Goods and Service Tax: Transactions within a State under GST – Interstate Transactions under GST - Illustrations.

Unit-V: Time of Supply of Goods & Services: Value of Supply - Input Tax Credit – Distribution of Credit -Matching of Input Tax Credit - Availability of credit in special circumstances- Cross utilization of ITC between the Central GST and the State GST.

References:

1. Goods and Services Tax in India – Notifications on different dates.
2. GST Bill 2012.
3. Background Material on Model GST Law, Sahitya Bhawan Publications, Hospital Road, Agra - 282 003.
4. The Central Goods and Services Tax Act, 2017, NO. 12 OF 2017 Published by Authority, Ministry of Law and Justice, New Delhi, the 12th April, 2017.

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GOODS & SERVICE TAX FUNDAMENTALS

SEMESTER –V

MODEL PAPER

TIME -3hrs

Max. Marks: 70

SECTION-A

I. Answer any TWO of the following

2x5=10M

1. What is GST?
2. Dual GST

3. Subsumed under GST
- 4 .Central GST

SECTION-B

II. Answer any FOUR of the following

4x15=60M

5. What are the advantages of Goods and Services Tax
6. What is the Comprehensive Structure of GST in India?
7. Write about Australian Model of GST
8. Explain the Taxes and Duties outside the Purview of GST
9. What are the advantages of IGST?
10. Explain about interstate transactions under GST
11. What is Time supply of goods and services?
12. What is input tax credit and explain it with suitable examples.

*AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE VUYYURU
(AUTONOMOUS)*

(MANAGED BY SIDDHARTHA ACADEMY OF GENERAL & TECHNICAL EDUCATION VIJAYAWADA)

<i>Commerce</i>	CGST-503G/C	2020-2021	<i>III.B.Com(gen)</i>
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GOODS & SERVICE TAX FUNDAMENTALS

SEMESTER –V

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Introduction	GST:Principles	Taxes and Duties	Inter-State Goods and Services Tax	Time of Supply of Goods & Services
5Marks	1	1	1	0	1
15Marks	1	2	1	2	2
Weight age	20	35	20	30	35

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<i>Commerce</i>	<i>CCG-504G/C C</i>	<i>2020-2021</i>	<i>III.B.Com(gen/comp)</i>
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SEMESTER –V

SYLLABUS

Commercial Geography

Unit –I: The Earth: Internal structure of the Earth – Latitude – Longitude – Realms of the Earth –Evolution of the Earth – Environmental pollution - Global Warming - Measures to be taken to protect the Earth.

Unit -II: India – Agriculture: Land Use - Soils - Major crops – Food and Non-food Crops – Importance of Agriculture – Problems in Agriculture – Agriculture Development.

Unit -III: India – Forestry: Forests – Status of Forests in Andhra Pradesh – Forest (Conservation) Act, 1980 – Compensatory Afforestation Fund (CAF) Bill, 2015 - Forest Rights Act, 2006 and its Relevance – Need for protection of Forestry.

Unit -IV: India – Minerals and Mining: Minerals – Renewable and non Renewable – Use of Minerals – Mines – Coal, Barites, etc. – Singareni Coal mines and Mangampeta Barites – Districtwise Profile.

Unit-V: India – Water Resources – Rivers: Water resources - Rationality and equitable use of water – Protection measures - Rivers - Perennial and peninsular Rivers - Interlinking of Rivers - Experience of India and Andhra Pradesh.

References:

1. Shabiar Ahmad; Quazi ,Natural Resource Consumption and Environment Management, APH Publishing Corporation.
2. Tarachand, Economic and Commercial Geography of India, Vikas Publishing House.
3. Dr. S. Sankaran, Commercial Geography, Margam Publications, Chennai.
4. C. B. Memoria, Commercial Geography, Lal Agarwal & Co.

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Commerce	CCG-504G/C C	2020-2021	III.B.Com(gen/comp)
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SEMESTER –V

Model paper

Commercial Geography

Time: 3 hrs

Max. Marks: 70

SECTION- A

I. Answer any Two of the following questions

2 x 5= 10M

1. Global warming
2. Non-food crops
3. Singareni Coal Mines

4. Krishna River

SECTION- B

II. Answer any FOUR of the following questions

4 x 15 = 60M

5. Explain the internal structure of the Earth
6. What are the measures to be taken to protect the Earth
7. Explain about different types of soils.
8. Explain forest conservation Act 1980.
9. Describe the need for protection of forests
10. Explain renewable and non renewable minerals
11. Explain the importance of interlinking of rivers
12. What are the problems facing by the farmers in India?

	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
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*AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE VUYYURU
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(MANAGED BY SIDDHARTHA ACADEMY OF GENERAL & TECHNICAL EDUCATION VIJAYAWADA)

<i>Commerce</i>	<i>CCG-504G/C C</i>	<i>2020-2021</i>	<i>III.B.Com(gen/comp)</i>
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SEMESTER -V

Commercial Geography

Guidelines to the paper setter

	The Earth	India-Agriculture	India-Forestry	India-Minerals and Mining	India-Water resources-Rivers
5 Marks questions	1	1	0	1	1
15 Marks questions	2	2	2	1	1
Weight age	35	35	30	20	20

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<i>Commerce</i>	<i>CCB 505CE G/C</i>	<i>2020-2021</i>	<i>III.B.Com(gen)</i>
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SEMESTER -V

SYLLABUS

Central Banking

Unit-I: Introduction: Evolution and Functions of Central Bank - Development of Central Banks in Developed and Developing countries - Trends in Central Bank Functions.

Unit-II: Central banking in India: Reserve Bank of India - Constitution and Governance, Recent Developments, RBI Act. - Interface between RBI and Banks.

Unit-III: Monetary and Credit Policies: Monetary policy statements of RBI - CRR - SLR – Repo Rates - Reverse Repo Rates - Currency in circulation - Credit control measures.

Unit-IV: Inflation and price control by RBI: Intervention mechanisms - Exchange rate stability -Rupee value - Controlling measures.

Unit-V: Supervision and Regulation: Supervision of Banks - Basle Norms, Prudential Norms, Effect of liberalization and Globalization - Checking of money laundering and frauds.

References:

1. Reserve Bank of India Publication, Functions and Working of the RBI.
2. Vasant Desai, Central Banking and Economic Development, Himalaya Publishing.
3. S. Panandikar, Banking in India, Orient Longman.
4. Reserve Bank of India Publication, Report on Trends and Progress of Banking in India.
5. Annual Reports of Reserve Bank of India.
6. Rita Swami, Indian Banking System, International Publishing House Pt. Ltd..

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<i>Commerce</i>	<i>CCB 505CE G/C</i>	<i>2020-2021</i>	<i>III.B.Com(gen)</i>
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SEMESTER –V

Model paper
Central Banking

Time: 3 hrs

Max. Marks: 70

SECTION- A

I. Answer any TWO of the following questions

2 x 5= 10M

1. Evolution of Central Bank

2. RBI Act 1934
3. Statutory liquidity Ratio
4. Exchange Rate

SECTION- B

II. Answer any FOUR of the following questions 4 x 15 = 60M

5. Describe the functions Central Bank.
6. Explain the differences between RBI and Commercial banks
7. State the Role of RBI in Economic Development
8. What are the various weapons of credit control available to RBI
9. What is Cash Reserve Ratio? Explain its importance
10. Bring out Clearly the Exchange Control Function of the RBI
11. Explain Basle Norms and Prudential Norms.
12. Explain the Checking of Money laundering and frauds.

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<i>Commerce</i>	<i>CCB 505CE G/C</i>	<i>2020-2021</i>	<i>III.B.Com(gen)</i>
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SEMESTER –V

Guidelines to the paper setter

Central Banking

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Introduction	Central banking in India	Monetary and Credit policies	Inflation and price control by RBI	Supervision and Regulation
5Marks	1	1	1	1	0
15Marks	1	2	2	1	2
Weight age	20	35	35	20	30

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<i>Commerce</i>	<i>CRC-506 CE G/C</i>	<i>2020-2021</i>	<i>III.B.Com(gen)</i>
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SEMESTER –V

SYLLABUS

Rural and Farm Credit

Unit-I: Rural Credit: Objectives and Significance of Rural credit - Classification of rural credit -General Credit Card (GCC) – Financial Inclusion - Rupay Card.

Unit-II: Rural Credit Agencies: Institutional and Non-institutional Agencies for financing agriculture and Rural development - Self-Help Groups (SHG) - Financing for Rural Industries.

Unit-III: Farm Credit: Scope - Importance of farm credit - Principles of Farm Credit -Types- Cost of Credit - - problems and remedial measures - Kisan Credit Card (KCC) Scheme.

Unit-IV: Sources of Farm Credit: Cooperative Credit: PACS - APCOB - NABARD SLBC- Lead Bank Scheme - Role of Commercial and Regional Rural Banks - Problems of recovery and over dues.

Unit-V: Farm Credit Analysis: Eligibility Conditions - Analysis of 3 R's (Return, Repayment Capacity and Risk-bearing Capacity) - Analysis of 3 C's of Credit (Character, Capacity and Capital) - Crop index reflecting use and farm credit - Rural Credit Survey Reports..

References:

1. National Bank of Agricultural and Rural Development (NABARD) Annual report.
2. Economic Survey, Government of India.
3. Rural Development, Sundaram I.S., Himalaya Publishing House, Mumbai.
4. Rural Credit in India, C.S.Rayudu, Mittal Publications.
5. Farm Credit and Co-operatives in India, Tiruloati V., Naidu. V T Naidu, Vora & Co. Pub. Ltd.

Project Work: Rural Creditsurvey/Banking operations/Credit Appraisal

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Commerce	CRC-506 CE G/C	2020-2021	III.B.Com(gen)
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SEMESTER –V
Model paper

Rural and Farm Credit

Time: 3 hrs

Max. Marks: 70

SECTION- A

I. Answer any TWO of the following questions

2x 5= 10M

1. Rural Credit

2. Self Help Groups
3. Kisan Credit Card
4. Repayment Capacity

SECTION- B

II. Answer any FOUR of the following questions

4 x 15 = 60M

5. Describe the significance of Rural Credit
6. Explain Classification of Rural Credit
7. What are Institutional agencies for Financing Agricultural?
8. Explain advantages and disadvantages of Self-Help Groups
9. Explain the principles of Farm Credit
10. Write about NABARD
11. Explain the role of Regional Rural Banks in Farm Credit

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
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12. What is the Analysis of 3C'S of Credit?

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<i>Commerce</i>	<i>CRC-506 CE G/C</i>	<i>2020-2021</i>	<i>III.B.Com(gen)</i>
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SEMESTER –V

Guidelines to the paper setter

Rural and Farm Credit

	Rural Credit	Rural Credit Agencies	Farm Credit	Sources of Farm Credit	Farm Credit Analysis
5Marks	1	1	1	0	1
15Marks	2	2	1	2	1
Weight age	35	35	20	30	20

PROJECT FOR CLUSTER ELECTIVE COM507

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF COMPUTER SCIENCE

MINUTES OF BOARD OF STUDIES




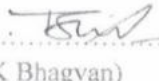
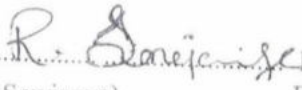


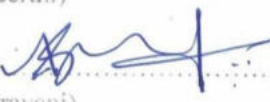



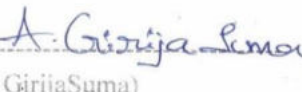
ODD SEMESTER

18-07-2020

Minutes of the meeting of Board of Studies in Computer Science for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 10.30 A.M on 18-07-2020 through Online Video Conference Cisco WebEx Meeting

Sri T.Naga PrasadaRao **Presiding**

Members Present:

- 1)  Chairman
(T.NagaPrasadaRao) Head, Department of Computer Science,
AG&SG Siddhartha Degree College of Arts & Science,
Vuyyuru-521165
- 2)  University
(Dr. R.Kiran Kumar) Nominee Professor,
Dept of Computer Science,
Krishna University, Machilipatnam.
- 3)  Academic
(Dr. Suresh Sundaradasu) Council Head, Department of Computer Science & Engineering,
Dhanekula Institute of Engineering & Technology,
Ganguru, JNTU(K), Vijayawada.
- 4)  Academic
(Dr. K Bhagvan) Council Professor, Department of Computer Science
K.B.N College,
Vijayawada.
- 5)  Industrial
(R. Sowjanya) Excerpt .Net Developer,
Mavensoft Systems Private limited
Madaapur, Hyderabad.
- 6)  Member
(K Srikanth) Lecturer in Computer Science, AG&SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165.
- 7)  Member
(T.Keerthi) Lecturer in Computer Science, AG&SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
- 8)  Member
(A. Sravani) Lecturer in Computer Science, AG&SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
- 9)  Member
(S.Prabhavathi) Lecturer in Computer Science, AG&SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
- 10)  Member
(V. N. Malleswara Rao) Lecturer in Computer Science, AG&SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
- 11)  Member
(A.Preethi) Student in M.Sc. Computer Science, AG& SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
- 12)  Member
(A GirijaSuma) Student in B.Sc. Computer Science, AG&SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165

Agenda for B.O.S Meeting.

1. To recommend syllabi for V Semester of III year Degree B.Sc(MPCs, MCCs.) & B.Com (C.A) as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
2. To recommend the Model Question Papers, Lab programs list and Blue print of Semester of III year Degree B.Sc. (MPCs, MCCs.)&B.Com (C.A) as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
3. To recommend the Guidelines to be followed by the question paper setters in Computer Science for III year Degree B.Sc.(MPCs, MCCs.)&B.Com (C.A) as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
4. To recommend any changes in the syllabi for I, III, V Semesters of I, II, III year Degree B.Sc.(MPCs, MCCs) and B.Com.(C.A.).
5. To recommend the new paper for III BCOM (C.A) in Semester V Syllabi, Model Question paper, Lab programs list and Blue print, Guidelines to be followed by the question paper setters in Computer Science for III Year Degree B.Com. (C.A) with effect from the Academic Year 2020-21.
6. To recommend the teaching and evaluation methods to be followed under Autonomous status.
7. Any suggestions regarding the certificate courses for all Computer Science and Non-Computer Science students, seminars, workshops, Guest lecturers to be organized.
8. Any other matter.

Resolutions

- 1) Discussed and recommended, to implement same syllabi for V Semester of III year Degree B.Sc.(MPCs, MCCs.), B.Com (C.A.) as per the APSCHE guidelines and their instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21 except one paper in III B.Com (CA)
- 2) Discussed and recommended to introduce a new paper titled “Object Oriented Programming with Java” for III BCOM(C.A) in Semester V, Syllabi, Model Question paper, Lab programs list and Blue print, Guidelines to be followed by the question paper setters in Computer Science for III Year Degree B.Com.(C.A) with effect from the Academic Year 2020-21.
- 3) Discussed and recommended, to implement Model Question Papers, Lab Programs List and blue print for V Semester of III year Degree B.Sc.(MPCs, MCCs.), B.Com (C.A.) as per the APSCHE guidelines and their instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
- 4) Discussed and recommended the syllabi without any changes for the following semesters
 - I Semester of I Year B.Sc. (MPCs, MCCs) & B.Com.(CA).
 - III Semester of II Year B.Sc. (MPCs, MCCs) & B.Com.(CA).
 - Foundation Course for All Degree Courses under Choice Based Credit System with Effect from Academic Year 2020-21.
- 5) Discussed and recommended the teaching and evaluation methods for approval of Academic Council.
- 6) **It Is Resolved And Recommended to follow the New Syllabi And Model Question Paper of Regulations of 2020-21 in I Semester Of I Year Degree Bsc(Mpcs,Mccs) And Bcom(CA).**
- 7) **It is Resolved and Recommended NO changes in the Syllabi for III Semester of II Year Degree Bcom(CA),BA,BSC,BSC(MPCS,MCCS).**

Teaching methods:

Besides the conventional methods of teaching, we use modern technology i.e. Using of LMS and LCD projector to display on power board etc.. for better understanding of concepts.

Evaluation of a student is done by the following procedure for All III Year B.Sc. (MPCs, MCCs) & B.Com. (C.A). For the Batch of Students Admitted from Academic year 2018-19.

There are two components in the Valuation and Assessment of a student – Internal Assessment (IA) Semester Examinations (SE).

Internal Assessment (IA)

- i. The maximum mark for IA is 30 and SE is 70 for theory; and for practical papers 50.
- ii. Each IA written examination is of 1 hour’s duration for 20 marks. The tests will be conducted centrally. The average of two such IA is calculated for 20 marks.
- iii. Other Innovative Components will be for 5 Marks. The innovative component is for 5 marks, conducted during the class hours by the staff member/ in charge of the subject, in the form of assignments/ quiz/ seminars /ppt/Online- assignments/Open Book/Viva Voce/ Group work/ Mini Project/ Exhibition, etc. The topic and time for submission/ presentation will be announced by the staff member/ in charge of the subject in advance. Each student should explain and defend his/her presentation. For attendance 5 Marks are allotted.
- iv. The semester examination will be of 3 hours with maximum 70 marks.
- v. There is no passing minimum marks for IA.

Semester-End Examinations: A student should register himself/herself to appear for the Semester Examinations by payment of the prescribed fee.

- i) The Semester Examinations will be in the form of a comprehensive examination covering the entire syllabus in each subject. It will be of 3 hours duration & Foundation course 2 hours irrespective of the number of credits allotted to it.
- ii) If a candidate fails to obtain pass marks even after the due to less mark in the IA examination, the marks of the next examination will be converted to be out of 100.
- iii) Even though the candidate is absent for two IA exams/obtain zero marks the external marks are considered (if he/she gets 40/70) and the result shall be declared as 'PASS'.
- iv) The maximum marks for each Paper shall be 100.
- v) The maximum marks for Semester-End examinations shall be 70 marks and duration of the examination shall be 3 Hours.
- vi) Semester-End examinations shall be conducted in theory papers and the practical papers are conducted at the end of every Semester for B.Sc. (MPCs, MCCs) & B.Com.(C.A) only.
- vii) Odd semester practical end examinations are to be evaluated by Internal Examiners and Even semester practical end examinations are to be evaluated by External Examiners.

Question paper guide lines for Practical Examinations at the end of Semesters Two Practical Programs to be conducted out of 15 programs at the end of Semester Practical Examination time 3Hrs & Maximum Marks 50 Scheme of valuation Semesters – B.Sc. (MPCs, MCCs), B. Com (CA)

Computer Science Practical's - External (Time: 3 hrs.)

Total Marks: 25M

1. Programs Writing (2) :	10 marks,
2. Viva voice :	5 marks
3. Execution & Result :	10 marks

Total Marks :	25

Computer Science Practical's- Internal

Total Marks: 25M

1. Attendance :	5 marks
2. Record :	10 marks
3. Day to day observation :	5 marks
4. Problem solving and Execution :	5 marks

Total Marks :	25

7). Discussed and recommended to organize certificate courses for Computer Science and Non-Computer Science students separately, Seminars, Guest lectures, Work-shops to upgrade the knowledge of students, for the approval of the Academic Council.

8) It is resolve to follow further changes if any in the syllabus by competent authority.

9) Discussed and Recommend to introduce Value Added Course on "**BASIC COMPUTER APPLICATIONS & MS OFFICE**" with Course Code "**BCAM101**" for 1ST MPC's & MCC's -1ST SEM

10) Discussed and Recommend to introduce Value Added Course on "**AWS**" with Course Code "**VACAWS-01**" for II MPC's & MCC's -3rd SEM

11) Discussed and Recommend to introduce Value Added Course on "**CLOUD COMPUTING**" with Course Code "**VACCC12**" for IIIBCOM(CA)-5TH SEM

12) Suggestions To recommend Online certificate courses such as NPTL, APSSDC - PYTHON, R-Programming, Amazon Web services and JAVA -----etc. To fill the curriculum gaps from II Year Degree on words.


Chairman

AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYURU.
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(With Effect from Academic Year 2020-21)

COMPUTER SCIENCE	CSC-501C	2020-'21	B.Sc.(MPCs,MCCs)
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SEMESTER – V

PAPER – V

Max. Marks 70

Syllabus

DATA BASE MANAGEMENT SYSTEMS

NO Of Hours: 4

No Of Credits: 3

Pass Marks 28

Course Objective: Design & develop database for large volumes & varieties of data with optimized data processing techniques.

Unit – I: Database Systems Introduction

12Hrs

Database Systems: Introducing the database and DBMS, Why the database is important, *Historical Roots:* Files and File Systems, Problems with File System, Data Management, Database Systems. *Data Models:* The importance of Data models, Data Model Basic Building Blocks, The evaluation of Data Models, Degree of Data Abstraction.

Unit - II: Relational Database & Data Modelling

12 Hrs

The Relational Database Model: A logical view of Data, Keys, Integrity Rules, Relational Set Operators, The Data Dictionary and the system Catalog, Indexes, Codd’s relational database rules. *Entity Relationship Model:* The ER Model **Advanced Data Modelling:** The Extended Entity Relationship Model, Entity clustering, Entity integrity.

Unit-III: Normalization and Database Design

14 Hrs

Data base Tables and Normalization, The need Normalization, The Normalization Process, High level Normal Forms, Normalization and database design, de normalization. *Database Design:* The Information System, The Systems Development Life Cycle, The Database Life Cycle, Centralized Vs Decentralized design.

Unit-IV: Structured Query Language

12 Hrs

Introduction to SQL: Data Definition Commands, Data Manipulation Commands, Select queries, Advanced Data Definition Commands, Advanced Select queries, Virtual Tables, SQL Join Operators, Sub queries and correlated queries, SQL Functions.

Unit-V: Procedural SQL

10Hrs *Introduction to PL/SQL:* Triggers, Stored Procedures, PL/ SQL Stored Functions

Prescribed Text Book:

1. Peter Rob, Carlos Coronel, Database Systems Design, Implementation and Management, Seventh Edition, Thomson (2007).

Reference Books:

1. Elimasri / Navathe, Fundamentals of Database Systems, Fifth Edition, Pearson Addison Wesley
2. Raman A Mata – Toledo/Panline K Cushman, Database Management Systems, .
2. C.J.Date, A.Kannan, S.Swamynathan, An Introduction to Database Systems, Eight edition,
3. “Database System Concepts” by Abraham Silberschatz, Henry Korth, and S.Sudarshan,
4. Atul Kahate, Introduction to Database Management Systems, Pearson Education (2006).

Student Activity: 1. Create your college database for placement purpose. 2. Create faculty database of your college with their academic performance scores

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COMPUTER SCIENCE	CSC-501C	2020-'21	B.Sc.(MPCs,MCCs)
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SEMESTER – V

PAPER – V

Max. Marks 70

Model Paper

DATA BASE MANAGEMENT SYSTEMS

NO Of Hours: 4

No Of Credits: 3

Pass Marks 28

Section-A

Answer any **FOUR** Questions. Each question carries **FIVE** Marks

4x5=20M

1. Explain the Components of Database System?
2. Explain Relational Data Model?
3. Write about Relational Set Operators?
4. Describe BCNF?
5. Write about Special Functions?
6. Explain Stored Procedures?

Section-B

Answer any **FIVE** Questions. Each question carries **TEN** Marks

5X10=50M

7. What is File? Explain the problems with File system
8. Explain the Degree of Data Abstraction.
9. Explain E.F.CODDs' rules.
10. Explain Extended Entity Relationship Model.
11. Explain the concept of Normal Forms.
12. Explain about SDLC.
13. Explain DDL and DML commands.
14. Explain about triggers.

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(With Effect from Academic Year 2020-21)

COMPUTER SCIENCE	CSC-501C	2020-'21	B.Sc.(MPCs,MCCs)
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SEMESTER – V PAPER – V Max. Marks 70 Pass Marks 28

Guidelines for paper setting '**DATA BASE MANAGEMENT SYSTEMS**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	1	2
Unit-3	1	2
Unit-4	1	1
Unit-5	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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(With Effect from Academic Year 2020-21)

COMPUTER SCIENCE	CSC-501P	2020-'21	B.Sc.(MPCS,MCCs)
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SEMESTER – V

PAPER – V

Max. Marks 50

Lab List DATA BASE MANAGEMENT SYSTEMS

Pass Marks 25

No. of Hours per week: 2

External: 25

Internal: 25

Credits: 2

1. Creation of college database and establish relationships between tables
2. Explain various data type in Oracle.
3. Show the structure of the Emp table.
4. Show the structure of the DEPT table.
5. Explain the syntax of SELECT statement.
6. Create a query to display the name, job, hiredate and employee number from emp table.
7. Create a query to display unique jobs from the emp table.
8. Create a query to display the empno as EMP#, ename as EMPLOYEE and Hire_date from emp.
9. Create a query to display all the data from the EMP table. Separate each column by a comma and name the column THE_OUTPUT.
10. Create a query to display the name and salary of employees earning more than 2850.
11. Create a query to display the name and salary for all employees whose salary is not in the range of 1500 and 2850.
12. Display the employee name, job and start date of employees hired between February 20 ,1981 and May 1, 1981. Order the query in ascending order of start date
13. Display the employee name and department number of all the employees in departments 10 and 30 in alphabetical order by name.
14. List the name and salary of employees who earn more than 1500 & are in department 10 or 30.
15. Display the name, salary and commissions and sort data in descending order of salary and commission.
16. Display the name and job title of all employees who do not have a manager.
17. Display the name, job and salary for all employees whose job is Clerk or Analyst and their salary is not equal to 1000, 3000 or 5000.
18. Display the names of all employees where the third letter of their name is an 'A'.
19. Display the names of all employees who have two 'L's in their name and are in department 30 or their manager is 7782.
20. Display the name , salary and commission for all employees whose commission amount is grater than their salary increased by 10%.
21. Explain all the character functions.
22. Explain all the number functions.
23. Explain all the Date functions.
24. Explain different types of JOIN.
25. Write a query to display the name, department number and department name for all employees.
26. Create a unique listing of all jobs that are in department 30. and include the location of department 30 in the output.
27. Write a query to display the employee name, department name and location of all employees who earn a commission.
28. Write a query to display the name ,job department number and department name for all employees who work in 'DALLAS'.

29. Create a query to display the name and hire date of any employee hired after employee BLAKE.
30. . Display all employees names and hire dates along with their manager's name and hire date for all employees who were hired before their managers.
31. Create your own users and give permissions to you and explain GRANT and REVOKE Commands.

A. Create MOVIE database using the following tables.

MOVIE:Movie no: primary key, varchar2Movie name: NOT NULL, varchar2Movie Type: varchar2Star: Varchar2

CUSTOMER: Customer No: primary key, varchar2 Customer Name: NOT NULL, varchar2 Address: NOT NULL Phone no: Number INVOICE: Invoice no: Varchar2, primary key
Movie no: foreign key Customer no: foreign key
Price: NOT NULL, Number

Queries:

1. List the movie names that starts with 'p'
2. List the number of the movies those price ranges from 15000 and 20000
3. List the customers who have phone numbers.
4. List the customers who have no phone numbers.
5. Display the following string
(a) A Customer "customer number" has bought the "movie number" "movie name" with "Price"
6. List the customers by calculating price as $(price * tax) / 100$ where $tax = 0.5$ and rename the column as 'tax'.
7. List the movies, which are owned by 2 customers.
8. List the customers, who bought 2 picture names.
9. List the customers, who are not the range of 15000 and 20000.

B. Create Student database using the following tables.

STUDENT: Sno : primary key, numberSname : NOT NULL, varchar2 Address: Varchar2
COURSE:Sno : Foreign key.Course Name : varchar2

Queries:

1. Alter table by adding a column fees in table COURSE.
2. Alter table by modifying the address to VARCHAR2(20)
3. Create a view on which the students who joined in one course only.

PL/SQL.

1. Write A Pl/Sql Program To Swap Two Numbers Without Using Third Variable.
2. Write A Pl/Sql Program To Generate Multiplication Tables For Numbers 2,4 And 6
3. Write A Pl/Sql Program To Display Sum Of Even Numbers And Sum Of Odd Numbers In The Given Range.
4. Write A Pl/Sql Program To Check The Given Number Is Pollinndrome Or Not.
5. Write A Pl/Sql Program To Display Top 10 Rows In Emp Table Based On Their Job And Salary.
6. Write A Procedure Update The Salary Of Employee, Who is Not Getting Commission by 10%.

Reference Books:

1. Oracle Pl/Sql By Example. Benjamin Rosenzweig, Elena Silvestrova, Pearsoneducation 3rd Edition
2. Sql& Pl/Sql For Oracle 10g, Black Book, Dr.P.S. Deshpande

AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYURU.
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(With Effect from Academic Year 2020-21)

COMPUTER SCIENCE	CSC-502C	2020-'21	B.Sc.(MPCs,MCCs)
SEMESTER – V	PAPER – VI	Max. Marks 70	

Syllabus

SOFTWARE ENGINEERING

NO of Hours: 4

No Of Credits: 3

Pass Marks 28

Course Objectives

The Objective of the course is to assist the student in understanding the basic theory of software engineering, and to apply these basic theoretical principles to a group software development project.

UNIT-I: Introduction to Software Engineering & Process **12Hrs**

The Evolving Role of Software– Software - The Changing Nature of Software, Software Myths, Legacy Software.

Process: Software Engineering-A Layered Technology - A Process Framework - The Capability Maturity Model Integration (CMMI) - Process Patterns, Process Assessments - Personal Software Process(PSP), Team Software Process (TSP).

Unit-II: Process Models **12Hrs**

The Waterfall Models - Increment Process Models: The Increment Model, The RAD Model - Evolutionary Process Models: Prototyping, The Spiral Model, The Concurrent Development Model- The Unified Process: Phases of The United Process, Unified Process Work Products.

Unit-III: Requirements Engineering **14 Hrs**

Requirements Engineering Tasks - Initiating The Requirements Engineering Process - Eliciting Requirements: Collaborative Requirements Gathering, Quality Function Deployment, User Scenarios, Elicitation Work Products - Negotiating Requirements - Validating Requirements.

Unit-IV: Design Engineering **10Hrs**

Design Process And Design Quality - Design Concepts - The Design Model: Data Design Elements, Architectural Design Elements, Interface Design Elements, Component-Level Design Elements, Deployment -Level Design Elements.

Unit-V:Software Quality: **12Hrs**

Quality and Quality Concepts, Software Quality Assurance (SQA), Software Reviews, Formal Technical Reviews, Formal Approaches to SQA and SSQA, Software Reliability, The ISO 9000 Quality Standards, The SQA Plan.

Prescribed Text Book:

1. Software Engineering – A Practitioner’s Approach, Sixth Edition - Roger S Pressman, TATA McGrawHill: Chapters: 1,2,3,7,8 and 9)

Reference Books:

1. Software Engineering Principles and Practice by Deepak Jain Oxford University Press
2. Sommerville, “Software Engineering”, Eighth Edition, Pearson Education, 2007

Student Activity: Visit any financial organization nearby and prepare requirement analysis report 2. Visit any industrial organization and prepare risk chart.



A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

(An Autonomous institution in the jurisdiction of Krishna University, Machilipatam)

NAAC "A" Grade, ISO 9001:2015 Certified Institution

DEPARTMENT OF COMPUTER SCIENCE

Minutes of the meeting of Board of Studies in Computer Science for PG held on 06-04-2023 in the Department of Computer Science.

Semester	:	II	Programme	:	M.Sc (Comp. Sci.)
Course	:	Web Technologies	Course Code	:	22CS2T3
Course delivery method	:	Class room / Blended	Credits	:	4
Credits	:	4	CIA marks	:	30
No. of lecture hours / week	:	4	Semester end exam	:	70
Total no. of lecture hours	:	60	Total marks	:	100
Year of Introduction	:	2020-21	Year of Revision	:	2022-23
% of revision	:	30%			
Course content suggested by APSCHE		Additions			Deletions
UNIT-I: Introduction to Software Engineering & Process		NIL			NIL
Unit-II: Process Models				VB Script:	
Unit-III: Requirements Engineering					
Unit-IV: Analysis Model					Analysis Model
Unit-V: Design Engineering		Design Engineering moved to unit-4			
		Software Quality			

It is resolved and recommend the changes in the syllabus of course code: 22CS2T3, Course: Web Technologies from the academic year 2022-23 onwards for I M.Sc (Computer Science), II Semester.

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SEMESTER – V

PAPER – VI

Max. Marks 70

Model Paper

SOFTWARE ENGINEERING

NO of Hours: 4

No Of Credits: 3

Pass Marks 28

Section – A

Answer any **FIVE** Questions. Each question carries **FIVE** Marks

4x5=20M

1. Write about Software Layered Technology?
2. Explain about Process Framework?
3. Explain about RAD Model?
4. Explain Validating Requirements
5. Explain about Modularity?
6. Write about Software Reliability?

Section – B

Answer any **FIVE** Questions. Each question carries **TEN** Marks

5X10=50M

7. Explain about CMMI?
8. Explain about Software Myths?
9. Explain about Incremental Model?
10. Explain about Spiral Model?
11. Explain about Requirements Engineering Tasks?
12. Write about design concepts in design engineering?
13. Explain about Quality and Quality Concepts?
14. Write about SSQA?

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SEMESTER – V PAPER – VI Max. Marks 70 Pass Marks 28

Guidelines for paper setting '**SOFTWARE ENGINEERING**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	1	2
Unit-3	1	1
Unit-4	1	1
Unit-5	1	2

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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SEMESTER – V

PAPER – VI

Max. Marks 50

Lab List

SOFTWARE ENGINEERING

Pass Marks 25

No. of Hours per week: 2

External: 25

Internal: 25

Credits: 2

A. ATM

- | | |
|--|--------------------------------------|
| 1.Objective of an ATM System. | 2. Use-case Diagram of an ATM System |
| 3. Class Diagram of an ATM System | 4. Sequence Diagram of an ATM System |
| 5. Activity Diagram of an ATM System | 6. State Diagram of an ATM System |
| 7. Deployment Diagram of an ATM System | 8. ER Diagram of an ATM System |

B. Library management System

- | | |
|--|---|
| 1. Objective of Librarymanagement System. | 2. Use-case Diagram of Librarymanagement |
| 3. Class Diagram of Library management System | 4. Sequence Diagram of Library management |
| 5. Activity Diagram of Library management System | 6. State Diagram of Library management |
| 7. Deployment Diagram of Library management System | 8. ER Diagram of Library management |

C. Barcode Reader

- | | |
|--|---------------------------------------|
| 1. Objective of Barcode Reader | 2. Use-case Diagram of Barcode Reader |
| 3. Class Diagram of Barcode Reader | 4. Sequence Diagram of Barcode Reader |
| 5. Activity Diagram ofBarcode Reader | 6. State Diagram ofBarcode Reader |
| 7. Deployment Diagram ofBarcode Reader | 8. ER Diagram ofBarcode Reader |

D. Safe Home System

- | | |
|---|---|
| 1. Objective of Safe Home System. | 2. Use-case Diagram of Safe Home System |
| 3. Class Diagram of Safe Home System | 4. Sequence Diagram of Safe Home System |
| 5. Activity Diagram ofSafe Home System | 6. State Diagram ofSafe Home System |
| 7. Deployment Diagram of Safe Home System | 8. ER Diagram of Safe Home System |

E. Online Book Store System

- | | |
|---|---|
| 1. Objective of Online Book Store System | 2. Use-case Diagram of Online Book Store System |
| 3. Class Diagram of Online Book Store System | 4. Sequence Diagram of Online Book Store |
| 5. Activity Diagram ofOnline Book Store System | 6. State Diagram ofOnline Book Store System |
| 7. Deployment Diagram of Online Book Store System | 8. ER Diagram of Online Book Store |

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SEMESTER – V

PAPER – V

Max. Marks 70

Pass Marks 28

Syllabus OBJECT ORIENTED PROGRAMMING USING JAVA

Total Hrs: 60

NO. Of. Hours: 5

Credits: 3

UNIT-I

10Hrs

Fundamentals of Object – Oriented Programming: Introduction, Object Oriented paradigm, Basic Concepts of OOP, Benefits of OOP, Applications of OOP, Java features:

UNIT-II

14Hrs

Overview of Java Language: Introduction, Simple Java program structure, Java tokens, Java Statements, Implementing a Java Program, Java Virtual Machine, Command line arguments. **Constants, Variables & Data Types:** Introduction, Constants, Variables, Data Types, Declaration of Variables, Giving Value to Variables, Scope of variables, Type casting, Getting Value of Variables, **Operators.**

UNIT-III

12Hrs

Decision Making & Branching: Introduction, Decision making with if statement, Simple if statement, if-Else statement, Nesting of if-else statements, the else if ladder, the switch statement, the conditional operator. **Looping:** Introduction, while statement, do-while statement, for statement, Jumps in loops.

UNIT-IV

12 Hrs

Classes, Objects & Methods: Introduction, defining a class, adding variables, adding methods, creating objects, Accessing class members, Constructors, Method overloading, Method Overriding, Static members, Nesting of methods;

UNIT-V

12Hrs

Inheritance: Extending a Class, Overriding Methods, Final Variables and Methods, Final Classes, Abstract Methods and Classes; **Arrays, Strings And Vectors:** Arrays, One-dimensional arrays, Creating an array, Two – dimensional arrays, Strings, Vectors, Wrapper classes; **Interfaces: Multiple Inheritance:** Introduction, Defining interfaces, Extending interfaces, Implementing interfaces, Assessing interface variables;

Prescribed Text Book:

1. E. Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill Company.

Reference Books

1. Programming In Java By Sachin Malhotra And Saurabh Choudhary From Oxford University Press
2. Object Oriented Programming Through Java by P. Radha Krishna, Universities Press
3. John R. Hubbard, Programming with Java, Second Edition, Schaum's outline Series,
4. Deitel&Deitel. Java TM: How to Program, PHI (2007)
5. Java Programming: From Problem Analysis to Program Design- D.S Mallik

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SEMESTER – V PAPER – V

Max. Marks 70

Pass Marks 28

Syllabus

OBJECT ORIENTED PROGRAMMING USING JAVA

Total Hrs: 60

NO. Of. Hours: 4

Credits: 3

Section- A

Answer FOUR Questions. Each Question carries FIVE Marks.

4*5=20M

1. What are the Applications of OOP?
2. What is a variable? Explain its rules?
3. Explain different data types in java?
4. Write about switch statement?
5. Explain about Constructors?
6. Differences between arrays and vectors?

Section- B

Answer FIVE the Questions. Each Question carries TEN Marks

5*10=50M

7. Explain the Concepts of Object Oriented Programming?
8. Explain java Features?
9. Explain the structure of java program?
10. Explain different types of Operators in Java with Examples?
11. Explain about Decision Making Statements with examples?
12. Explain Looping statements with example?
13. Explain Method overloading with an example program?
14. Explain about inheritance?

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SEMESTER – V PAPER – V

Max. Marks 70

Pass Marks 28

Syllabus

OBJECT ORIENTED PROGRAMMING USING JAVA

Total Hrs: 60

NO. Of. Hours: 4

Credits: 3

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	1	2
Unit-2	2	2
Unit-3	1	2
Unit-4	1	1
Unit-5	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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SEMESTER – VPAPER – V

Lab ListOBJECT ORIENTED PROGRAMMING USING JAVA Pass Marks 25

No. of Hours per week: 2 External: 25 Internal: 25 Credits: 2

1. Write a program to perform various String Operations
2. Write a program to print the given number is Armstrong or not?
3. Prompt for the cost and selling price of an article and display the profit (or) loss
4. Write a program to print the numbers given by command line arguments
5. Write a program on class and object in java
6. Illustrate the method overriding in JAVA
7. Write a program to find the Simple Interest using Multilevel Inheritance
8. Write a program to display matrix multiplication.
9. Write a program on interface in java
10. Write a program on inheritance

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COMPUTER SCIENCE	CCSC 506C	2020-'21	B.Com.(C.A.)
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SEMESTER – V

PAPER – VI

Max. Marks 70

Syllabus

DATA BASE MANAGEMENT SYSTEMS

NO Of Hours: 5

No Of Credits: 3

Pass Marks 28

Course Objective: Design & develop database for large volumes & varieties of data with optimized data processing techniques.

Unit – 1: Database Systems Introduction

12Hrs

Database Systems: Introducing the database and DBMS, Why the database is important,

Historical Roots: Files and File Systems, Problems with File System, Data Management, Database Systems.

Data Models: The importance of Data models, Data Model Basic Building Blocks, The evaluation of Data Models.

Unit - II: Relational Database & Data Modelling

12 Hrs

The Relational Database Model: A logical view of Data, Keys, Integrity Rules, Relational Set Operators, Indexes, Codd's relational database rules. *Entity Relationship Model:* The ER Model

Advanced Data Modelling: The Extended Entity Relationship Model, Entity clustering.

Unit-III: Normalization and Database Design

14 Hrs

Normalization of database tables: Database Tables and Normalization, The need for Normalization, The Normalization Process, High level Normal Forms, Normalization and database design, de normalization.

Unit-IV: Structured Query Language

12 Hrs

Introduction to SQL: Data Definition Commands, Data Manipulation Commands, Select queries, Advanced Data Definition Commands, Advanced Select queries, Virtual Tables, SQL Join Operators,

Unit-V: Procedural SQL

10 Hrs

Introduction to PL/SQL : Triggers, Stored Procedures, PL/ SQL Stored Functions

Prescribed Text Book:

- 1. Peter Rob, Carlos Coronel, Database Systems Design, Implementation and Management, Seventh Edition, Thomson (2007).**

Reference Books:

3. Elimasri / Navathe, Fundamentals of Database Systems, Fifth Edition, Pearson Addison Wesley
4. Raman A Mata – Toledo/Panline K Cushman, Database Management Systems, Schaum's Outlibe series, Tata McGraw Hill (2007).
5. C.J.Date, A.Kannan, S.Swamynathan, An Introduction to Database Systems, Eight edition, Pearson Education (2006).
6. "DatabaseSystemConcepts" by AbrahamSilberschatz, Henry Korth, and S.Sudarshan, McGrawhill
7. Atul Kahate, Introduction to Database Management Systems, Pearson Education (2006).

Student Activity:

1. Create your college database for placement purpose.
2. Create faculty database of your college with their academic performance scores

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SEMESTER – V

PAPER – VI

Max. Marks 70

Model Paper

DATA BASE MANAGEMENT SYSTEMS

NO Of Hours: 5

No Of Credits: 3

Pass Marks 28

Section-A

Answer any **FOUR** Questions. Each question carries **FIVE** Marks

4x5=20M

1. Explain the Components of Database System?
2. Explain Entity Relationship Model?
3. Write about Relational Set Operators?
4. Describe BCNF?
5. Write about Special Functions?
6. Explain Stored Procedures?

Section-B

Answer any **FIVE** Questions. Each question carries **TEN** Marks

5X10=50M

7. What is File? Explain the problems with File system?
8. Explain any three different Data Models?
9. Explain E.F. CODDs' rules?
10. Explain Extended Entity Relationship Model?
11. Explain the concept of Normal Forms?
12. Explain different join operators?
13. Explain DDL and DML commands?
14. Explain about triggers?

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SEMESTER – V

PAPER – VI Max. Marks 70

Pass Marks 28

Guidelines for paper setting '**DATA BASE MANAGEMENT SYSTEMS**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	1	2
Unit-3	1	1
Unit-4	1	2
Unit-5	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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SEMESTER – V

PAPER – VI

Max. Marks 50

Lab List DATA BASE MANAGEMENT SYSTEMS

Pass Marks 25

No. of Hours per week: 2

External: 25

Internal: 25

Credits: 2

1. Creation of college database and establish relationships between tables
2. Explain various data type in Oracle.
3. Show the structure of the Emp table.
4. Show the structure of the DEPT table.
5. Explain the syntax of SELECT statement.
6. Create a query to display the name, job, hiredate and employee number from emp table.
7. Create a query to display unique jobs from the emp table.
8. Create a query to display the empno as EMP#, ename as EMPLOYEE and Hire_date from emp.
9. Create a query to display all the data from the EMP table. Separate each column by a comma and name the column THE_OUTPUT.
10. Create a query to display the name and salary of employees earning more than 2850.
11. Create a query to display the name and salary for all employees whose salary is not in the range of 1500 and 2850.
12. Display the employee name, job and start date of employees hired between February 20, 1981 and May 1, 1981. Order the query in ascending order of start date
13. Display the employee name and department number of all the employees in departments 10 and 30 in alphabetical order by name.
14. List the name and salary of employees who earn more than 1500 & are in department 10 or 30.
15. Display the name, salary and commissions and sort data in descending order of salary and commission.
16. Display the name and job title of all employees who do not have a manager.
17. Display the name, job and salary for all employees whose job is Clerk or Analyst and their salary is not equal to 1000, 3000 or 5000.
18. Display the names of all employees where the third letter of their name is an 'A'.
19. Display the names of all employees who have two 'L's in their name and are in department 30 or their manager is 7782.
20. Display the name, salary and commission for all employees whose commission amount is greater than their salary increased by 10%.
21. Explain all the character functions.
22. Explain all the number functions.
23. Explain all the Date functions.

Create Student database using the following tables.

STUDENT: Sno : primary key, Sname : NOT NULL, Address: Varchar2

COURSE: Sno : Foreign key. Course Name : varchar2

Queries:

1. Alter table by adding a column fees in table COURSE.
2. Alter table by modifying the address to VARCHAR2(20)
3. Create a view on which the students who joined in one course only.

PL/SQL.

1. Write A PL/Sql Program To Swap Two Numbers Without Using Third Variable.
2. Write A PL/Sql Program To Generate Multiplication Tables For Numbers 2,4 And 6
3. Write A PL/Sql Program To Display Sum Of Even Numbers And Sum Of Odd Numbers In The Given Range.
4. Write A PL/Sql Program To Check The Given Number Is Pollinndrome Or Not.
5. Write A PL/Sql Program To Display Top 10 Rows In Emp Table Based On Their Job And Salary.

Reference Books:

1. Oracle PL/Sql By Example. Benjamin Rosenzweig, Elena Silvestrova, Pearsoneducation 3rd Edition
2. Sql& PL/Sql For Oracle 10g, Black Book, Dr.P.S. Deshpande

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SEMESTER – V

PAPER – VII

Max. Marks 70

Syllabus

WEB TECHNOLOGIES

NO Of Hours: 5

No of Credits: 3

Pass Marks 28

Unit -I Introduction to XHTML:

Introduction to HTML, Basic html, Document body text, Hyperlinks, Lists, Tables, Images, Frames, Forms and XHTML.

Unit- II: CSS:

Cascading Style Sheets: Introduction, Defining your own styles, properties and values in styles, Formatting blocks of information, Layers.

Java Script: java Script, the basics, Variables, String Manipulations, Mathematical functions, Statements, Operators.

Unit –III: Objects in Java Script & Dynamic HTML with Java Script

Objects in Java Script: Data and objects in java script, Regular expressions, Exception Handling, built in objects, Events.

Dynamic HTML with Java Script: Data validation, Rollover buttons, Moving images.

Unit –IV: XML Defining Data for Web Applications

XML: Introduction to XML, Basic XML, document type definition, XML Schema, Document object model, Using XML parser.

Unit -V:JSP:

JSP Lifecycle, Basic Syntax, EL (Expression Language), EL Syntax, Using EL Variables

Prescribed Books:

- 1. Chris Bates, Web Programming Building Internet Application, Second Edition, Wiley**
2. Head First Servlets and JSP 2nd Edition, Bryan Basham, Kathy Sierra
2. Uttam Kumar Roy, Web Technologies from Oxford University Press

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COMPUTER SCIENCE	CCSC-507C	2020-'21	B.Sc.(MPCs)
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SEMESTER – V

PAPER – VII

Max. Marks 70

Model Paper

WEB TECHNOLOGIES

No of Credits: 3

Pass Marks 28

Section-A

Answer **FOUR** Questions. Each Question carries **FIVE** Marks.

5 X 4=20M

1. Write about structure of HTML Document with an example?
2. Explain about lists in HTML?
3. Write about java script statements?
4. Write about Rollover buttons?
5. Describe XML Elements?
6. Write the syntax of EL and EL variables?

Section-B

Answer **FIVE** Questions. Each Question carries **TEN** Marks.

5 X 10=50M

7. Explain about hyper links? Write about how to link another pages
8. What is Form? Explain about forms with examples
9. What is CSS? How to design Cascading style sheet
10. Explain about Mathematical Functions
11. Explain about Regular Expressions
12. Write about Data validations in DHTML
13. Explain about Document Object Model
14. Explain about JSP Lifecycle with neat diagram

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SEMESTER – VI

PAPER – VII

Max. Marks 70

Pass Marks 28

Guidelines for paper setting '**WEB TECHNOLOGIES**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	1	2
Unit-3	1	2
Unit-4	1	1
Unit-5	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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SEMESTER – III PAPER – III

Max. Marks 70

Pass Marks 28

Syllabus OBJECT ORIENTED PROGRAMMING USING JAVA Total Hrs: 60

NO. Of. Hours: 4

Credits: 3

UNIT-I

15Hrs

Fundamentals of Object – Oriented Programming: Introduction, Object Oriented paradigm, Basic Concepts of OOP, Benefits of OOP, Applications of OOP, Java features: **Overview of Java Language:** Introduction, Simple Java program structure, Java tokens, Java Statements, Implementing a Java Program, Java Virtual Machine, Command line arguments. **Constants, Variables & Data Types:** Introduction, Constants, Variables, Data Types, Declaration of Variables, Giving Value to Variables, Scope of variables, Type casting, Getting Value of Variables; **Operators & Expressions.**

UNIT-II

15 Hrs

Decision Making & Branching: Introduction, Decision making with if statement, Simple if statement, if-Else statement, Nesting of if-else statements, the else if ladder, the switch statement, the conditional operator. **Looping:** Introduction, While statement, do-while statement, for statement, Jumps in loops. **Classes, Objects & Methods:** Introduction, Defining a class, Adding variables, Adding methods, Creating objects, Accessing class members, Constructors, Method overloading, Static members, Nesting of methods;

UNIT-III

10 Hrs

Inheritance: Extending a Class, Overriding Methods, Final Variables and Methods, Final Classes, Abstract Methods and Classes; **Arrays, Strings And Vectors:** Arrays, One-dimensional arrays, Creating an array, Two – dimensional arrays, Strings, Vectors, Wrapper classes; **Interfaces: Multiple Inheritance:** Introduction, Defining interfaces, Extending interfaces, Implementing interfaces, Assessing interface variables;

UNIT-IV

10 Hrs

Multithreaded Programming: Introduction, Creating Threads, Extending the Threads, Stopping and Blocking a Thread, Lifecycle of a Thread, Using Thread Methods, Thread Exceptions, Thread Priority, Synchronization, Implementing the 'Runnable' Interface.

Managing Errors And Exceptions: Types of errors: Compile-time errors, Runtime errors, Exceptions, Exception handling, Multiple Catch Statements, Using finally statement,

UNIT-V

10 Hrs

Applet Programming: local and remote applets, Applets and Applications, Building Applet code, Applet Life cycle: Initialization state, Running state, Idle or stopped state, Dead state, Display state. **Packages:** Introduction, Java API Packages, Using System Packages, Namingconventions, Creating Packages, Accessing a Package, using a Package. **Managing Input/ Output Files in Java:** Introduction, Concept of Streams, Stream classes, Byte Stream Classes, Input Stream Classes, Output Stream Classes, Character Stream classes: Reader stream classes, Writer Stream classes, Using Streams;

Prescribed Text Book:

1. E.Balaguruswamy, Programmingwith JAVA, A primer, 3e, TATA McGraw-Hill Compan

Reference Books

1. Programming In Java By Sachin Malhotra And Saurabh Choudhary From Oxford UP
2. Object Oriented Programming Through Java by P. Radha Krishna, Universities Press
3. John R. Hubbard, Programming with Java, Second Edition, Schaum's outline Series,
4. Deitel&Deitel. Java TM: How to Program, PHI (2007)
5. Java Programming: From Problem Analysis to Program Design- D.S Mallik

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SEMESTER – III

PAPER – III

Max. Marks 70

Pass Marks 28

Syllabus:

OBJECT ORIENTED PROGRAMMING USING JAVA

Total Hrs: 60

NO. Of. Hours: 4

Credits: 3

Section- A

Answer FOUR Questions. Each Question carries FIVE Marks.

4*5=20M

- 1.Explain the structure of a java program?
- 2.Explain different data types in java?
- 3.Explain about Constructors?
- 4.Differences between arrays and vectors?
- 5.Explain about Exception handling?
- 6.Explain the applet life cycle?

Section- B

Answer FIVE the Questions. Each Question carries TEN Marks

5*10=50M

- 7.Explain the Concepts of Object-Oriented Programming?
- 8.Explain java Features?
- 9.Explain Looping statements with example
- 10.Explain Method overloading with an example program
- 11.Explain about inheritance
- 12.Explain the concept of interface?
- 13.Explain life cycle of a thread?
- 14.Explain about Byte Stream Classes?

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COMPUTER SCIENCE

CSC-301C

2020-21

B. Com (CA)

SEMESTER – III

PAPER – III

Max. Marks 70

Pass Marks 28

Syllabus

OBJECT ORIENTED PROGRAMMING USING JAVA

Total Hrs: 60

NO. Of. Hours: 4

Credits: 3

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	1	2
Unit-3	1	2
Unit-4	1	1
Unit-5	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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SEMESTER – III

PAPER – III

Max. Marks:50

Lab List OBJECT ORIENTED PROGRAMMING USING JAVA Pass Marks 25

No. of Hours per week: 2 External: 25 Internal: 25 Credits: 2

1. Write a program to perform various String Operations
2. Write a program to print the given number is Armstrong or not?
3. Prompt for the cost and selling price of an article and display the profit (or) loss
4. Write a program to print the numbers given by command line arguments
5. Write a program on class and object in java
6. Illustrate the method overriding in JAVA
7. Write a program to find the Simple Interest using Multilevel Inheritance
8. Write a program to display matrix multiplication.
9. Write a program to implement Exception handling
10. Write a program to create packages in Java
11. Write a program on interface in java
12. Write a program to Create Multiple Threads in Java
13. Write a program to assign priorities to threads in java

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COMPUTER SCIENCE	ICT-II-301C	2020-'21	B.A, B.Com, B.Sc.
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SEMESTER – III PAPER – II Max. Marks 50 Pass Marks 20 Total Hrs 30

Syllabus Internet Fundamentals and Web Tools NO. Of Hrs: 2 Credits: 2

Unit-I : 6Hrs

Fundamentals of Internet : Networking Concepts, Data Communication – Types of Networking, Internet and its Services, Internet Addressing – Internet Applications –Computer Viruses and its types – Browser – Types of Browsers.

Unit-II: 6Hrs

Internet applications: Using Internet Explorer, Standard Internet Explorer Buttons, Entering a Web Site Address, Searching the Internet – Introduction to Social Networking: twitter, tumbler, LinkedIn, face book, flicker, Skype, yelp, vimeo, yahoo, Google+, YouTube, WhatsApp, etc.

Unit-III : 6Hrs

E-mail : Definition of E-mail - Advantages and Disadvantages – User-Ids, Passwords, Email Addresses, Domain Names, Mailers, Message Components, Message Composition, Mail Management, Email Inner Workings.

Unit IV: 6Hrs

WWW- Web Applications, Web Terminologies, Web Browsers, URL – Components of URL, Searching WWW – Search Engines and Examples

Unit-V : 6Hrs

Basic HTML: Basic HTML – Web Terminology – Structure of a HTML Document –HTML, Head and Body tags – Semantic and Syntactic Tags – HR, Heading, Font, Image and Anchor Tags –Different types of Lists using tags – Table Tags, Image formats – Creation of simple HTML Documents.

Reference Books :

1. In-line/On-line : Fundamentals of the Internet and the World Wide Web, 2/e - by Raymond Greenlaw and Ellen Hepp, Publishers : TMH

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SEMESTER – III PAPER – II Max.Marks 50 Pass Marks: 20 Total: 30 Hrs

Modal Paper: Internet Fundamentals and Web Tools NO. Of Hrs: 2Credits: 2

Section- A

Answer FOUR Questions. Each Question carries FIVE marks.

4X5=20M

1. Explain types of Browsers?
2. Explain Internet Applications.
3. Write a short note on Internet Explorer?
4. Explain User Id and Password of e-mail?
5. Explain Advantages and disadvantages of electronic mail.4
6. Explain about WWW?
7. Explain briefly about web application.
8. Explain Head and Body tags in HTML Document?

Section- B

Answer Any THREE Questions. Each Question carries TEN Marks.

3×10=30M

9. Explain types of Networking?
10. Explain Internet Services?
11. Explain any 10 Social Net Working Sites
12. Explain Message Composition.
13. Explain different types of Search Engines.
14. Explain different lists in HTML.

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SEMESTER – III

PAPER – II

Max. Marks 50

Guidelines for paper setting '**INTERNET FUNDAMENTALS AND WEB TOOLS**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	2	1
Unit-3	2	1
Unit-4	1	1
Unit-5	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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SEMESTER – III PAPER – III Max. Marks 70 Pass Marks 28 Total Hrs: 60

Syllabus Office Automation Tools

NO. Of. Hours: 5Credits:4

Unit-I:

12Hrs

MS-Excel: features of Ms-Excel, Parts of MS-Excel window, entering and editing data in worksheet, number formatting in excel, different cell references, how to enter and edit formula in excel, auto fill and custom fill, printing options.

Unit-II:

12 Hrs

Formatting options: Different formatting options, change row height, formulae and Functions,

Functions: Meaning and advantages of functions, different types of functions available in Excel.

Unit-III:

12Hrs

Charts: Different types of charts, Parts of chart, chart creation using wizard, chart operations, data maps, graphs, data sorting, filtering. Excel sub totals, scenarios, what-if analysis.

Macro: Meaning and advantages of Macros, creation, editing and deletion of macros - Creating a macro, how to run, how to delete a macro.

Unit-IV:

12Hrs

MS Access: Creating a Simple Database and Tables: Features of Ms-Access, Creating a Database, Parts of Access. **Tables:** table creation using design view, table wizard, data sheet view, import table, link table.

Forms: The Form Wizard, design view, columnar, tabular, data sheet, chart wizard.

Unit- V:

12Hrs

Finding, Sorting and Displaying Data: Queries and Dynasts, Creating and using select queries, Returning to the Query Design, Multi-level sorts, Finding incomplete matches, showing All records after a Query, saving queries - Crosstab Queries. **Printing Reports:** Form and Database Printing..

Reference Books:

- 1.Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)
- 2.Ed Bott, Woody Leonhard, Using Microsoft Office 2007, Pearson Education(2007)
3. Sanjay Saxsena, Microsoft Office, 4.Microsoft Office, BPB Publications

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SEMESTER – III PAPER – III

Max. Marks 70

Pass Marks 28 Total Hrs: 60

Model PaperOffice Automation Tools

NO Of Hours: 5 Credits: 4

Section- A

Answer FOUR Questions. Each Question carries FIVE Marks.

4*5=20M

1. Explain Features of Excel?
2. What are advantages of Functions?
3. Explain what is sorting?
4. Explain how to delete Macro?
5. Write any 5 Features of Access?
6. Describe Query used in MS-Access?

Section- B

Answer FIVE the Questions. Each Question carries TEN Marks.

5*10=50M

7. Explain Parts of Excel Sheet with neat Diagram.
8. Explain AutoFill and Custom Fill Options in Excel.
9. Explain different types of Functions available.
10. Explain different Formatting options.
11. What is Chart? Explain different types of Charts.
12. What is Macro? Explain Creating and Editing of Macro.
13. What is Form? Explain Creating Form using Form Wizard.
14. Explain How to Create a Query, Showing, all records after Query and Saving Query.

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SEMESTER – III PAPER – III Max. Marks 70

Guidelines for paper setting **'OFFICE AUTOMATION TOOLS'**

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	1	2
Unit-3	1	2
Unit-4	1	1
Unit -5	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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SEMESTER – III PAPER – III Max. Marks 50 Pass Marks 20 Total Hrs: 30

Lab list Office Automation Tools

Ms-Word

1. Create a vesting Card
2. Create a template for organization using Header & Footer
3. Mail merge Procedure

Ms-Excel

1. Create an electronic spreadsheet in which you enter the following decimal numbers and convert into Octal, Hexadecimal and Binary numbers vice versa. Decimal Numbers: 35, 68, 95, 165, 225, 355, 375, 465. Binary Numbers: 101, 1101, 111011, 10001, 110011001, 111011111.

2. The ABC Company shows the sales of different products for 5 years. Create column chart, 3D-column and Bar chart for the following data

YEAR PRODUCT-1 PRODUCT-2 PRODUCT-3 PRODUCT-4

2003 1000 800 900 10002004 800 80 500 9002005 1200 190 400 8002006 400 200 300 1000

2007 1800 400 400 1200

3. Create a suitable examination data base and find the sum of the marks(total) of each student and respective class secured by the student rules:

Pass if marks in each subject ≥ 35

Distinction if average ≥ 75

First class if average ≥ 60 but < 75

Second class if average ≥ 50 but < 60

Third class if average ≥ 35 but < 50

Fail if marks in any subject is < 35

Display average marks of the class, subject wise and pass percentage

4. Create an electronic spread sheet in which you enter date and time functions in Excel

5. Create a electronic spread sheet in statistical and mathematical functions in Excel

MS-PowerPoint

1. Make a Power point presentation on your strengths, weaknesses, hobbies, factors that waste your time.
2. Make a Power point presentation to represent your College profile.
3. Make a Power point presentation of all the details of the books that you had studied in B.Sc. First Year.
4. Create a Presentation without Animation.

MS-ACCESS

1. Create a database using MS-ACCESS with at least 5 records table1 structure: register number , name, dob, gender, class table2 structure: register number m1 m2 m3 m4 m5 total maintain the relationship between two tables with register number as a primary key and answer the following queries: show the list of students with the following fields as one query register number name gender total marks
2. Maintain the relationship between above two tables with register number as a primary key and answer the following reports: reports must have following columns report1 with register number, name, marks of all subjects and 90 hrs (3 hrs/ week) computer science 10 of 44 total report2 with register number, total , percentage.
3. Create a database using ms-access with at least 5 records table1 structure: emp-code emp-name age gender dob table2 structure: emp-code basic-pay maintain the relationship between two tables with emp-code as a primary key generate the following reports: report1: emp-code emp-name basic-pay da,hra gross-salary report2: emp-code emp-name age gender gross-salary

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SEMESTER – I

PAPER – I

Max. Marks 70

Syllabus: Problem Solving in 'C'

NO of Hours: 4

No Of Credits: 3

Pass Marks 28

UNIT-I: General Fundamentals& Programming Languages 10Hrs

General Fundamentals: Introduction to computers: Block diagram of a computer, characteristics and limitations of computers, applications of computers, types of computers, computer generations. Introduction to Algorithms and Programming Languages: Algorithm – Key features of Algorithms, Flow Charts, **Programming Languages** – Generations of Programming Languages – Structured Programming Language- Design and Implementation of Correct, Efficient and Maintainable Programs.

UNIT- II: Introduction To C & Decision Making control Statements 12Hrs

Introduction to C: Introduction – Structure of C Program – Writing the first C Program – File used in C Program – Compiling and Executing C Programs – Using Comment , Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C-Operators in C- Programming Examples.

Decision Control and Looping Statements: Introduction to Decision Control Statements– Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Goto Statement.

UNIT III: Arrays 10 Hrs

Arrays: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array– Operations on Arrays – one dimensional, two dimensional and multi dimensional arrays, character handling and strings.

UNIT-IV:Functions & Structures 13Hrs

Functions: Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive functions.

Structure, Union, and Enumerated Data Types: Introduction – Nested Structures – Arrays of Structures – Structures and Functions– Union – Arrays of Unions Variables – Unions inside Structures – Enumerated DataTypes.

UNIT-V:Pointes&Files 15Hrs

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Pointer Expressions and Pointer Arithmetic – Null Pointers – Memory Allocation in C Programs – Memory Usage – Dynamic Memory Allocation – Drawbacks of Pointers

Files: Introduction to Files – Using Files in C – Reading Data from Files – Writing Data to Files – Detecting the End-of-file – Error Handling during File Operations – Accepting Command Line Arguments.

BOOKS

1. E Balagurusamy – Programming in ANSIC – Tata McGraw-Hillpublications.
2. Brain W Kernighan and Dennis M Ritchie - The 'C' Programming language” - Pearsonpublications.
3. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publications.
4. YashavantKanetkar - Let Us 'C' – BPBPublications.

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SEMESTER – I PAPER – II Max. Marks 70 Pass Marks 28

Syllabus Problem Solving in 'C' NO. Of. Hours: 4Credits:3

Section- A

Answer FOUR Questions. Each Question carries FOUR Marks.

4*5=20M

1. Explain different types of programming languages?
2. Explain about Data types in C?
3. Write about Break and Continue Statement?
4. Explain one dimensional array with example?
5. Explain Storage Classes in C?
6. Explain dynamic memory allocation?

Section- B

Answer FIVE the Questions. Each Question carries EIGHT Marks

5*10=50M

7. Draw and Explain Block Diagram of Computer?
8. Explain about Algorithm and Flowchart with Examples?
9. Explain decision making Looping statements with examples?
10. Explain Structure of C Program with Example?
11. Write about two dimension arrays? Give an example program?
12. Write Passing Parameters Techniques in Functions?
13. Difference between structures and unions?
14. What is File? Explain different File Modes?

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SEMESTER – I

PAPER – I

Max. Marks 70

Guidelines for paper setting '**Problem Solving in C**'

<u>Unit wise weight age of Marks</u>	Section-A (Short answer questions)	Section-B (essay questions)
Unit-I	1	2
Unit-II	2	2
Unit-III	1	1
Unit-IV	1	2
Unit -V	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weight age given by us

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SEMESTER – I PAPER – I Max. Marks: 50 Pass Marks 25

No. of Hours per week: 2 External: 25 Internal: 25 Credits: 2

Lab List: Problem solving in C LAB

1. Write a program to check whether the given number is Armstrong or not.
2. Write a program to find the sum of individual digits of a positive integer.
3. Write a program to generate the first n terms of the Fibonacci sequence.
4. Write a program to find both the largest and smallest number in a list of integer values.
5. Write a program to demonstrate reflection of parameters in swapping of two integer values using **Call by Value & Call by Address**
6. Write a program that uses functions to add two matrices.
7. Write a program to calculate factorial of given integer value using recursive functions.
8. Write a program for multiplication of two N X N matrices.
9. Write a program to perform various string operations.
10. Write a program to search an element in a given list of values.
11. Write a program to sort a given list of integers in ascending order.
12. Write a program to calculate the salaries of all employees using **Employee (ID, Name, Designation, Basic Pay, DA, HRA, Gross Salary, Deduction, Net Salary)** structure.
DA is 30 % of Basic Pay
HRA is 15% of Basic Pay
Deduction is 10% of (Basic Pay + DA)
Gross Salary = Basic Pay + DA + HRA
Net Salary = Gross Salary - Deduction
13. Write a program to illustrate pointer arithmetic.
14. Write a program to read the data character by character from a file.
15. Write a program to create **Book (ISBN, Title, Author, Price, Pages, Publisher)** structure and store book details in a file and perform the following operations
Add book details
Search a book details for a given ISBN and display book details, if available
Update a book details using ISBN
Delete book details for a given ISBN and display list of remaining books

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COMPUTER SCIENCE	CCSC-103C	2020-'21	B.Com(CA)
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SEMESTER – I

PAPER – I

Max. Marks 70

Syllabus: INTRODUCTION TO INFORMATION TECHNOLOGY

NO of Hours: 4

No Of Credits: 3

Pass Marks 28

Unit – I: Database Systems Introduction Computer Basics

13H'rs

Introduction, Evolution of Computers, Generations of Computers, Classification of Computers, Computer Concepts, Applications Of Computers, Central Processing Unit.

Memory Representation:

Random Access Memory, Read Only Memory, Magnetic Tape, Magnetic Disk, Types of Magnetic Disks, Types of Optical Disk, USB.

UNIT-II: Input/output Devices & Operating Systems

15H'rs

Input/output Devices: Types of Input Devices, Types Of Output Devices, Programming Languages: Types of Programming Languages, Generations of Programming Languages

Software: Definition Of Software, Relationship Between Software And Hardware, Categories Of Software,

Operating Systems: Introduction, Types of Operating Systems

UNIT-III: Information Technology & Internet Applications:

12H'rs

Information Technology: Components Of Information Technology, Role Of Information Technology, Information Technology In Business, Manufacturing, Mobile Computing, Public Sector, Defence Sectors, Media, Education, Publication.

Internet Applications: Evolution Of Internet, Basic Internet Terms, Internet Applications.

Introduction, E-mail, Information Browsing Service, The World Wide Web, Information Retrieval from the World Wide Web, Other Facilities Provided by Browsers, Audio on the Internet, Pictures, Animation and Video via Internet

UNIT-IV: Data Communications

10H'rs

Introduction, Data Communication, Components Of Data Communication, Data Transmission Mode, Analog To Digital Data Transmission, Data Communication Measurement, Transmission Media, Guided/Wired Media, Unguided/Wireless Media.

UNIT-V: Computer Networks:

10H'rs

Introduction to Computer Networks, Types of Computer Networks, Network Topologies, OSI Model, TCP/IP Model.

Text Book:

1. Introduction To Information Technology (Second Edition) , Pearson, ITI Education Solutions Limited.
2. Introduction of Information Technology, by V. Rajaraman, PHI Learning Private Limited.

Reference Book:

1. Fundamentals Of Computers, Balagurusamy, McGraw Hill Education (India) Private Limited.
2. Fundamentals Of Computers , Reema Thareja Oxford University

AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYURU.

An Autonomous college within the jurisdiction of Krishna University A.P, India.

(With Effect from Academic Year 2020-'21)

COMPUTER SCIENCE	CCSC-103C	2020-'21	B.Com(CA)
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SEMESTER – II PAPER – II Max. Marks 70 Pass Marks 28

Syllabus: INTRODUCTION TO INFORMATION TECHNOLOGY

NO. Of. Hours: 4Credits:3

Section- A

Answer FOUR Questions. Each Question carries FOUR Marks.

4*5=20M

1. What are the Applications of Computer?
2. Explain the types of Programming Languages?
3. What is Software? Explain Different Categories of Software?
4. What is the Role of Information Technology (IT)?
5. What are the components of Data Communication?
6. Explain different types of Topologies?

Section- B

Answer FIVE the Questions. Each Question carries EIGHT Marks

5*10=50M

7. What is Computer? Explain the classification Computer?
8. What is Memory? Explain different types of Memories?
9. Explain different types of Input & Output Devices?
10. What is an Operating System? Explain different types of Operating System?
11. What are the Components of Information Technology (IT)?
12. Write a Procedure to create an E-Mail?
13. Explain Data Transmission Modes?
14. Explain about OSI Model?

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An Autonomous college within the jurisdiction of Krishna University A.P, India.

(With Effect from Academic Year 2020-'21)

COMPUTER SCIENCE	CCSC-103C	2020-'21	B.Com. (C.A)
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SEMESTER – I PAPER – I Max. Marks 50 Pass Marks 20

Lab List Introduction to Information Technology & Internet NO Of Hours: 2 Credits: 2

1. Introduction to Computers.
2. Block Diagram of a Digital Computer
3. Memory Devices
4. Software & Hardware
5. MS-DOS.
 - b) Internal Commands
 - c) External Commands
6. Windows.
7. MS-Word:
 - a) Creating a letter pad.
 - b) Creating a visiting card.
 - c) Prepare a time table.
 - d) Header & footers
 - e) Mail Merge.
8. MS-Power Point:
 - a) Power point presentation for Fourth National Games.
 - b) Power point presentation for Indian Education System.
 - c) Power point presentation to represent your College profile.
 - d) Power point presentation using Multimedia.
 - e) Power point presentation to represent your department
9. How to create E-mail, Information Browsing Service
10. World Wide Web, Information Retrieval from the World Wide Web
11. Data Transmission Modes
12. Network Topologies

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF ECONOMICS

MINUTES OF BOARD OF STUDIES

ODD SEMESTER

15-07-2020

099

ACADEMIC YEAR 2020 - 2021

Minutes of the meeting of the Board of Studies in Economics of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 10.30 A.M on 15-07-2020 in the online mode.

Sri. G.S.S. SINGH. HOD, Economics has presided over the BOS meeting

Members Present:

- 1) S.S.S.Singh Chairman Head, Department of Economics
(Sri.G.S.S. SINGH) AG & SG S Degree College of Arts & Science
Vuyyuru-521165

- 2) N. Rama Rao member Lecturer, Department of Economics
(Sri. N. Rama Rao) AG & SG S Degree College of Arts & Science
Vuyyuru-521165

- 3) K. Madhu Babu University Head, Department of Economics
(Prof.K.Madhu Babu) Nominee Acharya Nagarjuna University,
Guntur.

- 4) D. GANGAIAH Academic Council Head, Department of Economics
(Sri.D.Gangaiah) Nominee V.S.R & N.V.R College, Tenali.

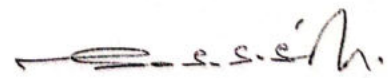
- 5) Dr. M. BABU RAO Academic Council Department of Economics,
Nominee C.R. Degree Chilakaluripet,
Guntur District,.

AGENDA

1. To review and recommend any changes in the syllabi, model Question papers and guidelines in the 1st Semester of B.A and B.Com, 3rd & 5th semesters of B.A Classes.;
2. To discuss and recommend the pattern of Internal Assessment to be followed from the Academic year 2020 – 21. .
3. To recommend the guidelines to be followed by the Question Paper Setters in Economics for the 1st, 3rd and 5th semester-end exams;
4. To recommend the teaching and the evaluation methods to be followed under the Autonomous System.
5. To propose the panel of Question paper setters and Examiners ..
6. Any other Matter.

RESOLUTIONS :

- 1). it is Resolved to continue the same syllabi under CBC System approved by the Academic Council of 2020 – 2021 for 1st Degree B.A & B.COM Economics papers, 3rd and 5th Semesters of B.A Classes.
- 2) out of maximum 100 marks in each paper 30 marks shall be allocated for Internal assessments regarding 1st, III and V Semesters.
 - A) To implement 30 marks for Internal assessment and 70 marks for External Assessment from the Academic year 2019 – 20 and that is also implemented to the V Semester from 2020 -21 Academic year.
 - B) out of these 30 marks , 20marks are allocated for internal tests ,5 marks are allocated for assignment for I, III and V Semesters. The two tests will be conducted and average of these two tests shall be deemed as the marks obtained by a student, and remaining 5 marks are allotted for attendance.
- 3). Discussed and recommended the syllabi, Model question papers under CBC system and Guidelines to be followed by the question paper setters of 1st semester of I B.A & I B.COM Economics papers and 3rd & 5th semesters of B.A Classes for the Academic year 2020 – 2021.
- 4) To follow the teaching and evaluation methods, it is also resolved to use various other methods like Group discussions, Quiz, Organizing Seminar's, Guest Lectures and Workshops to upgrade the knowledge of the students and impart new skills of Learning as frequently as possible.
- 5). resolved to authorize the chairman of Board of Studies to suggest the panel of paper setters and Examiners to the controller of Examinations as for the requirement.
- 6) The new syllabus was introduced in the I – SEMESTER Regarding the Micro Economics *Analysis*, according to the APSCHE instructions. It is Resolved to follow further changes if any in the syllabus by the competent Authority.


Chairman

ACADEMIC YEAR 2020 - 2021

A.G. & S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCES (AUTONOMOUS),
(2020-2021) VUYYURU

BA Economics Syllabus under CBCS

w.e.f. 2020-21 (Revised syllabus)

I Year B. A. Programme (U.C) Courses – Under CBCS

SEMESTER – I : COURSE - I MICROECONOMIC ANALYSIS

Hours per Week :- 5

NO. OF CREDITS: 4

Module-1: Economic Analysis and Methodology / Scarcity and Choice as fundamental problems of economics - Opportunity Cost - Production Possibilities Curve - Micro and Macro Analysis - Micro economic analysis – Scope and Importance - Principles of Microeconomics.: Allocation of Resources - Optimization, Equilibrium and Marginal analysis - Cardinal and Ordinal utility - Principle the concept of Welfare M

Module -2: Theory of Consumption Concept of Demand -Factors determining demand - Law of Demand - reasons and exceptions - Elasticity of Demand -Cardinal and Ordinal utility - Indifference Curve analysis : Properties of Indifference curves, Indifference Curve Map - Marginal Rate of Substitution - Budget Line - Changes -Consumer Equilibrium under Indifference Curve Analysis – Consumers' Surplus and Indifference Curve Analysis

Module -3: Theory of Production Concept and Objectives of Firm - Production Function : Cobb-Douglas Production Function -Law of Variable Proportions -Laws of Returns to Scale - Economies of large scale - Concepts of Cost - Total, Average and Marginal Costs - Law of Supply - Concept of Revenue : Total, Average and Marginal Revenues - Relation between Average and Marginal Revenues and elasticity of Supply

Module-4: Theory of Exchange Concepts of Market : Criteria for Classification of Markets - Perfect Competition– Conditions, Price and Output determination ; Monopoly : Conditions, Price and Output Determination - Price Discrimination; Monopolistic Competition - Assumptions - Price and output determination - Selling Costs ; Oligopoly -Types- Kinky demand curve and Price rigidity

Module - 5: Theory of Distribution The concepts of Functional and Personal Distribution of Income - Marginal Productivity Theory of Distribution - Modern Theory of Distribution - Concept of Rent - Ricardian Theory of Rent -- Marshall's concept of Economic Rent and Quasi Rent; Theories of Wage Determination: Subsistence Theory and Standard of Living Theory - Modern Theory of Wages; Classical Theory of Interest -Loanable Funds Theory of Interest - Liquidity Preference Theory of Interest; Theories of Profit: Risk and Uncertainty, Dynamic and Innovations Theories.

- Reference Books:
1. A. Koutsoyiannis, Modern Microeconomics - Macmillan, London.
 2. A. W. Stonier and D.C. Hague, A Text book of Economic Theory - ELBS & Long man Group, London.
 3. H. L. Ahuja, Advanced Economic Theory, S. Chand, 2004.
 4. P. N. Chopra, Principles of Economics, Kalyani Publishers, Ludhiana, 2018.
 5. H.S. Agarwal: Principles of Economics.
 6. P.A Samuelson & W.D. Nordhaus - Macroeconomics, Tata McGraw Hill, 18/e, 2005
 7. M. L. Seth, Microeconomics, Lakshmi Narayan Agarwal, 2006.
 8. D.M. Mithani & G.K. Murthy, Fundamentals of Business Economics, Himalaya Publishing, 2007.
 9. Telugu Academi Publications on Microeconomics.
 10. Microeconomics, Spectrum Publishing House, Hyderabad, 2017.

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 -2021) VUYYURU**

SEMESTER – I

COURSE CODE:ECO-101C

PAPER TITLE : MICRO ECONOMIC ANALYSIS

Duration : 3Hours

Maximum marks : 70

Pass marks : 28

SECTION - A

Answer any TWO of the following questions

(2x5=10 Marks)

1. Cardinal Utility.
2. Returns to Scale.
3. Features of Perfect Competition.
4. Quasi Rent.

SECTION – B

Answer any FOUR of the following questions

(4X15=60 Marks)

5. Explain the scope and importance of Micro Economics.
6. Explain the features of indifference curves.
7. Explain the Law of Demand and its exceptions.
8. Explain the Law of Variable Proportions.
9. Explain the price determination under perfect competition
- 10 Explain the price determination under Monopoly.
11. Critically Examine the Ricardian theory of Rent.
- 12.. Explain the Keynes Liquidity preference theory of Interest.

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS),
(2020 -2021) VUYYURU**

The Guidelines to be followed by the question paper setters in **MICRO ECONOMIC ANALYSIS** for the 1 Semester – End Examinations of I B.A (2020-2021)

PAPER TITLE :- MICRO ECONOMIC ANALYSIS

Paper- 1 Semester – 1 Maximum marks : 70 Duration : 3 Hours

Paper code:-Eco – 101C

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (15Marks)	---	1
Unit-2 (35Marks)	1	2
Unit-3 (20Marks)	1	1
Unit-4 (35Marks)	1	2
Unit-5 (35Marks)	1	2
TOTAL 140	20	120

- 1.Each question carries 5 marks in Section-A
- 2.Each Essay question carries 15 marks in Section –B
3. The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us .

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 - 2021) VUYYURU**

B. A. ECONOMICS

II Year B. A. Programme (UG) Courses – Under

CBCS Semester – III Credits :- 5

Paper – III (Core Paper) (5Hours)

Macro Economics - National Income, Employment and Money

Module - 1

Meaning, definition of Macro Economics - Importance of Macro Economics - Difference between Micro and Macro Economics - Paradox of Macro Economics - Limitations

Module - 2

National Income - Definitions, Concepts of National Income - Measurement of National Income - Circular flow of Income in Two, Three and Four Sector Economy.

Module - 3

Classical theory of Employment - Say's Law of Markets.

Module - 4

Keynesian Theory of Employment - Consumption function - Investment Function - Marginal Efficiency of Capital (MEC) - Concepts of multiplier and accelerator

Module - 5

Meaning and Functions of Money - Classification of money - Gresham's Law - RBI classification of Money. Theories of Money - Fisher's Quantity theory of Money Cambridge approach (Marshall, Pigou, Robertson & Keynes).

REFERENCES:

1. G.Ackley - "Macro Economics Theory and Policy", Collier Macmillan, 1978.
2. E.Shapiro - "Macro Economic Analysis", Galgotia Publications, 1999.
3. Central Statistical Organisations - "National Accounts Statistics".
4. R.Dornbush, s.Fisher and R.Startz - "Macro Economics", Tata Mc.Graw Hill, 9/e, 2004.
5. M.L.Seth-"Macro Economics", Lakshmi NarayanaAgarwal, 2015.
6. K.P.M. Sundaram - "Money, banking & International Trade", Sultan Chand, 2010.
7. Dillard, D - "The Economics of John Maynard Keynes", Crossby Lockwood & Sons.
8. M.N.Mishra&S.B.Mishra - "Insurance Principles & Practice" S.Chand 2012.
9. Bharati V.Pathak "The Indian Financial System Markets, Institutions & Services". Pearson 2008.
10. Telugu Academy Publication

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SEMESTER – III

COURSE CODE:ECO-301C

PAPER TITLE : Macro Economics - National Income, Employment and Money

Duration : 3Hours

Maximum marks : 70

Pass marks : 28

SECTION - A

Answer any TWO of the following questions

(2x5=10 Marks)

1. Macro Economics.
2. National Income
3. J.B.Say Law of Market.
4. Aggregate Demand

SECTION – B

Answer any FOUR of the following questions

(4X15=60 Marks)

5. Define Macro Economics and Explain its scope.
6. Distinguish between Micro Economics and Macro Economics
7. What is National Income? What are various concepts of National Income.
8. Explain the Methods of Estimating National Income.
9. Explain Say's Law of markets and Its importance in the theory of employment
10. State and explain consumption function . What are its Limitations and uses.
11. What is money? What are the functions of Money.
12. Critically Examine the Fisher's quantity theory of money.

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 - 2021) VUYYURU**

The Guidelines to be followed by the question paper setters in Macro Economics for the III Semester – End Examinations (2020 - 2021)

PAPER TITLE :MACRO ECONOMICS -- National Income, Employment and Money

Paper- III Semester – III Maximum marks : 70 Duration : 3 Hours

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (35Marks)	1	2
Unit-2 (35Marks)	1	2
Unit-3 (20Marks)	1	1
Unit-4 (20Marks)	1	1
Unit-5 (30Marks)	--	2
TOTAL 140	20	120

1. Each question carries 5 marks in Section-A
2. Each Essay question carries 15 marks in Section –B
3. The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 - 2021) VUYYURU

Final year BA Economics Syllabus Semester Paper – V.

ECONOMIC DEVELOPMENT AND INDIAN ECONOMY – Semester –V

Weekly 5 Hours, Credits - 5

PAPER CODE : ECO-501C

Module - 1

Concept of Economic Growth - Distinction between economic growth and development - Measurement of economic development -Theories of Economic Growth:
Adam Smith, Rostow, Karl Marx and Harrod&Domar Models.

Module - 2

Sustainable development - Balanced and unbalanced growth-choice of techniques
Labour intensive and capital intensive methods.

Module - 3

Basic features of the Indian Economy - Natural Resources - Important
Demographic features- Concept of Population Dividend - Population Policy.

Module - 4

National Income in India - trends and composition-poverty, inequalities and
Unemployment - Measures taken by the Government. - MGNREGS

Module - 5

Economic reforms - liberalization, privatization and globalisation - concept of
inclusive growth.

REFERENCES:

1. Dhingra, I.C - "Indian Economy", Sultan Chand, 2014.
2. RuddarDutt and K.P.M. Sundaram - "Indian Economy", S.Chand& Co., 2015.
3. G.M.Meier -"Leading Issues in Economic Development", Oxford University Press, New York,.
4. M.P.Todaro - "Economic Development", Longman, London 6/e, 1996.
5. Reserve Bank of India - Hand book of Statistics on-Indian Economy (Latest).
6. S.K.Misra&V,K,Puri - "Indian Economy", Himalaya Publishing House, 2015.
7. R.S.Rao, V.HanumanthaRao&N.VenuGopal (Ed) - Fifty Years of Andhra Pradesh (1956-2006), Centre for Documentation, Research and Communications, Hyderabad, 2007.
8. G.Omkarath - Economics - A Primer for India - Orient Blackswan, 2012.
9. Benjamin Higgins - Economic Development
10. Telugu Academy Publications.
11. Dr. Ch.S.G.K. Murthy, Indian Economy - Gitam University



A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 - 2021) VUYYURU

SEMESTER - V	COURSE CODE:ECO-501C
PAPER TITLE : ECONOMIC DEVELOPMENT AND INDIAN ECONOMY	

Duration : 3Hours

Maximum marks : 70

Pass marks : 28

SECTION - A

Answer any TWO of the following questions

(2x5=10 Marks)

1. Labour intensive techniques
2. Population Dividend
3. Poverty.
4. Globalisation.

SECTION - B

Answer any FOUR of the following questions

(4X15=60 Marks)

5. Critically Examine the Recordian theory of Growth.
6. Explain the concepts of Economic Growth and Economic Development and its differences
7. Critically Examine the Balanced Growth theory.
8. What are the Basic features of Indian Economy.
9. Explain the causes of population explosion in India.
10. Explain the composition and trends in India's National Income.
11. What is poverty? Mention the measures taken by the Government.
12. Explain the Liberalisation policy in India.

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 - 2021) VUYYURU**

The Guidelines to be followed by the question paper setters in **ECONOMIC DEVELOPMENT AND INDIAN ECONOMY** for the V Semester – End Examinations (2020 - 2021)

PAPER TITLE :ECONOMIC DEVELOPMENT AND INDIAN ECONOMY

Paper- V Semester – V Maximum marks : 70 Duration : 3 Hours

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (30Marks)	-----	2
Unit-2 (20Marks)	1	1
Unit-3 (35Marks)	1	2
Unit-4 (35Marks)	1	2
Unit-5 (20Marks)	1	1
TOTAL 140	20	120

- 1.Each question carries 5 marks in Section-A
- 2.Each Essay question carries 15 marks in Section –B
3. The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 - 2021) VUYYURU**

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 - 2021) VUYYURU**

**Final year BA Economics Syllabus Paper - V
INDIAN AND ANDHRAPRADESH ECONOMY - Semester -V**

Weekly 5 Hours, Credits - 5

PAPER CODE : ECO-502C

SEMESTER-5

Indian and Andhra Pradesh Economy

Syllabus

Module - 1

Indian Agriculture - Importance of Agriculture in India - Agrarian structure and relations- Factors determining Productivity- Agricultural Infrastructure - Rural credit - Micro Finance - Self Help Groups (SHGs) - Agricultural Price policy- concept of Crop Insurance - Food Security.

Module - 2

Structure and growth of Indian Industry - Industrial policies of 1956 & 1991 Meaning of Micro small and Medium Enterprises (MSMEs)- Problems and Prospects of small scale Industries in India.

Module - 3

Disinvestment in India - FEMA - Foreign direct investment - Services Sector in India - Reforms in Banking and Insurance -, IT, Education and Health.

Module - 4

Planning in India Economy - Objectives of Five year plans - Review of Five year Plans - Current Five year plan- NITI Aayog

Module - 5

Andhra Pradesh Economy - Population - GSDP - Sector Contribution and trends - IT - Small Scale Industry - SEZs.

REFERENCES:

1. Dhingra, I.C - "Indian Economy", Sultan Chand, 2014.
2. RuddarDutt and K.P.M. Sundaram - "Indian Economy", S.Chand & Co., 2015.
3. G.M.Meier - "Leading Issues in Economic Development", Oxford University Press, New York, 3/e.
4. M.P.Todaro - "Economic Development", Longman, London 6/e, 1996.
5. Reserve Bank of India - Hand book of Statistics on Indian Economy (Latest).
6. S.K.Misra & V.K,Puri - "Indian Economy", Himalaya Publishing House, 2015.
7. R.S.Rao, V.HanumanthaRao & N.VenuGopal (Ed) - Fifty Years of Andhra Pradesh (1956-2006), Centre for Documentation, Research and Communications, Hyderabad, 2007.
8. G.Omkarnath - Economics - A Primer for India - Orient Blackswan, 2012.
9. Telugu Academy Publications.
10. Dr.Ch.S.G.K.Murthy, Indian Economy - Gitam University.

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(AUTONOMOUS), (2020 - 2021) VUYYURU**

SEMESTER → V	COURSE CODE:ECO-502C
PAPER TITLE : Indian and Andhra Pradesh Economy	

Duration : 3Hours

Maximum marks : 70

Pass marks : 28

SECTION - A

Answer any TWO of the following questions

(2x5=10 Marks)

1. Industrial policy 1956.
2. FEMA
3. NeethiAyog .
4. SEZs (Special Economic Zones).

SECTION – B

Answer any FOUR of the following questions

(4X15=60 Marks)

5. Explain the Importance of Agriculture sector in India.
6. What is Green Revolution ? Explain the causes and Benefits of Green Revolution.
7. State the 1991 Industrial Resolution policy.
8. Explain the problems and remedies of small and cottage Industries in India.
9. Review the Disinvestment in India.
10. Explain the Foreign Direct Investment in India .
11. Review the performance of Five year plan's in India.
12. Explain the changes in the shares of various sectors in Gross Domestic Product in Andhrapradesh State.

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2020 - 2021) VUYYURU**

The Guidelines to be followed by the question paper setters in **Indian and Andhra Pradesh Economy** for the V Semester – End Examinations (2020 - 2021)

PAPER TITLE : Indian and Andhra Pradesh Economy

Paper- V Semester – V Maximum marks : 70 Duration : 3 Hours

Weightage for the question paper

syllabus.	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (30Marks)	-----	2
Unit-2 (35Marks)	1	2
Unit-3 (35Marks)	1	2
Unit-4 (20Marks)	1	1
Unit-5 (20Marks)	1	1
TOTAL 140	20	120

1. Each question carries 5 marks in Section-A
2. Each Essay question carries 15 marks in Section -B
3. The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

**A.G&S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND
SCIENCE (AUTONOMOUS), VUYYURU**



DEPARTMENT OF ENGLISH

**BOARD OF STUDIES
MEETING**

GENERAL ENGLISH

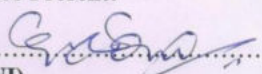

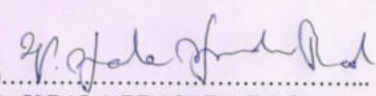

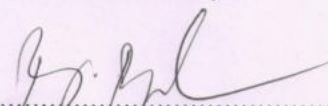
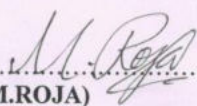
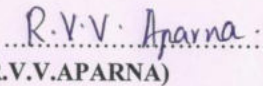
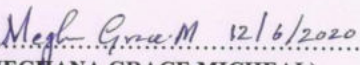
**VENUE
ENGLISH LANGUAGE LABORATORY**

**DATE
12th June, 2020**

Minutes of the meeting of Board of studies in General English for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held on 12-06-2020 in the English Language Laboratory at 12:00 pm.

Ms G.Soni ... Presiding

Members Present:

- | | | |
|--|-----------------------------|---|
| 1)..... 
(G.SONI) | Chairman | Head, Department of English
AG & SG S Degree College
Vuyyuru-521165 |
| 2)..... 
(Dr E.DILEEP) | University
Nominee | Professor,
Department of English
Krishna University,
Machilipatnam. |
| 3)..... 
(Dr V.PALA PRASADA RAO) | Academic Council
Nominee | Lecturer,
Department of English
JKC College, Guntur. |
| 4)..... 
(M.VINCENT PAUL) | Academic Council
Nominee | Head,
Department of English
Sir C.R.Reddy College,
Eluru |
| 5)..... 
(B.BULLI BABU) | Member | Lecturer in English
AG & SG S Degree College,
Vuyyuru-521165 |
| 6)..... 
(M.ROJA) | Member | Lecturer in English
A.G & S.G.S Degree College,
Vuyyuru-521165 |
| 7)..... 
(R.V.V.APARNA) | Member | Lecturer in English
A.G & S.G.S Degree College,
Vuyyuru - 521165 |
| 8).....
(Dr G.PRIYANK VARMA) | Member | Assistant Professor,
Department of English,
SRM University,
Amaravati - A.P. |
| 9)..... 
(MEGHANA GRACE MICHEAL) | Member | Soft Skills Trainer,
Payroll Officer, HSBC
HDPI, Hi-tech City,
Hyderabad. |

**Agenda for B.O.S Meeting of General English for I & III SEMESTERS for the Academic Year
2020-21**

The following proposals are submitted as a part of the agenda for the consideration and approval of the honorable members of Board of Studies, at the meeting held on 12th June, 2020.

1. To recommend syllabi for 1st and 3rd semesters of I & II Degree students of all disciplines for the Academic Year 2020-21.
2. To Consider and approve the additional inputs and minor modifications in the I & III Semester papers of General English.
3. To recommend and incorporate COMMUNICATIVE AND COMPETITIVE ENGLISH syllabus in UNIT-VI for 1st and 3rd semesters of I & II Degree students of all disciplines for the Academic Year 2020-21.
4. To recommend the Model Question Papers of 1st and 3rd semesters of I & II Degree of all disciplines for the Academic Year 2020-21.
5. To recommend the Guidelines to be followed by the question paper setters in General English for the 1st and 3rd semester-end exams of I & II Year students of all disciplines
6. To recommend the teaching and evaluation methods to be followed under Autonomous status.
7. To recommend topics for online teaching and evaluation patterns.
8. To consider and approve the implementation of Pedagogy methods like Quiz, classroom seminar, Assignment or Case study, Test, puzzles, viva and few more innovative methods in classroom teaching as indicated in the curricular plans.
9. To consider and approve to arrange Guest Lectures by Subject Experts @ 1(minimum) per Semester rounded up to more than 3 per academic year.
10. Any suggestions regarding Certificate/Add-on Courses, Seminars, Workshops, Guest Lectures and student competitions to be organized.
11. To note any changes in the syllabus if made by APSCHE for the admitted batch of I Semester of the academic year 2020-21.
12. Any other matter.

RESOLUTIONS

1. Discussed and recommended the syllabus for 1st and 3rd semesters of I & II Degree students of all disciplines for the approval of the Academic Council.
2. Considered and approved the minor changes and additional inputs meant for I & III Semester papers of General English.
3. Discussed and recommended the syllabi with some changes for 1st and 3rd semesters of I & II Degree students of all disciplines for the approval of the Academic Council. Incorporated **COMMUNICATIVE AND COMPETITIVE ENGLISH** syllabus in UNIT-VI for the 1st and 3rd semesters of I & II Degree students of all disciplines for the Academic Year 2020-21. UNIT-VI is meant for internal evaluation as it is purely based on Laboratory activity. Learner autonomy needs to be built into the activities which will provide hands on experience in using the language and thus “learning by doing”.

I SEMESTER

➤ **In Unit – VI of COMMUNICATIVE AND COMPETITIVE ENGLISH**, the following topics

1. Names and Actions

2. Descriptions and Connections

are incorporated in the syllabus . These two topics focus on sensitizing the students to the aspects of the language through a series of activities to develop grammatical applications, vocabulary, listening, reading, writing and speaking skills. The objective is now, therefore, to enhance the communication skills in English by providing adequate opportunities to practice.

Objectives:

At the end of the Topic-1 (**Names and Actions**), the students should be able to:

- Identify nouns and verbs
- Distinguish and use singular and plural nouns
- Distinguish the pronunciation of (past tense endings) /t/, /d/, /Id/ and (plural endings) /s/, /z/, /iz/
- Differentiate tense (time) from verbs (action)
- Recognize homophones
- Comprehend reading texts and respond to tasks

At the end of the Topic-2 (**Descriptions and Connections**), the students should be able to:

- Recognize adjectives
- Sort positive, comparative and superlative degree forms
- Convert word class: noun to verb, adjective to noun, verb to noun
- Transform adjectival forms (word level, sentence level: degrees of comparison)
- Compare prepositions and use the appropriate ones in a given context

- Recognize ‘rhymes’ – (sounds, words)
- Use adjectives & prepositions (speaking & writing)
- Introduce themselves using adjectives
- Describe their friends using adjectives
- Identify homophones
- Comprehend, interpret, and analyze reading texts

III SEMESTER

In Unit – VI of COMMUNICATIVE AND COMPETITIVE ENGLISH, the topic **COMPOSITION** is incorporated in the syllabus. This topic focuses on sensitizing the students to improve one’s own writing skills.

Objectives

At the end of this topic, the students should be able to:

- Use passive structures to write reports
 - Recognize& write emails
 - Develop hints by framing sentences & write paragraphs
 - Read texts using higher order thinking skills (academic reading comprehension)
4. Discussed and recommended the Question paper pattern for the 1st Semester of I Year students of all disciplines for the approval of the Academic Council.
 5. Discussed and recommended the guidelines to be followed by the question paper setters of General English for 1st Semester of first degree students of all disciplines for the approval of the Academic Council.
 6. Discussed and recommended the teaching methodology to be taken up and the evaluation patterns to be done.
 7. Discussed and recommended the topics for online teaching to be taught and the evaluation patterns to be taken up.
 8. Considered and approved the implementation of Pedagogy methods like Quiz, classroom seminar, Assignment or Case study, Test, puzzles, viva and few more innovative methods in classroom teaching as indicated in the curricular plans.
 9. Considered and approved to arrange Guest Lectures by Subject Experts rounded up to 3 per academic year.
 10. Discussed and recommended to continue the Certificate Course on ‘Competitive English’ this academic year too.
 11. Discussed and recommended to incorporate the 80% of the new syllabus if introduced / made by APSCHE for the admitted batch of the I Semester for the academic year 2020-21. The same syllabus shall be incorporated as per the guidelines along with UNIT -VI.

Teaching methods:

Besides the conventional methods of teaching (The Direct Method, The Structural Approach), Grammar-Translation Method, Audio-lingual Method, Communicative Language Teaching (CLT), Task-Based Language Learning etc., are practiced. We use modern technology i.e. using of an LCD projector, display on U boards, you tube videos etc., for better understanding of concepts.

There are two components in the Valuation and Assessment of a student – Internal Assessment (IA) and Semester Examinations (SE).

Internal Assessment (IA)

- The maximum mark for IA is 30 and SE is 70 for theory. Out of these 30 marks, 20 marks are allocated for announced tests.
- Each IA written examination is of 1 hour 30 minutes duration for 20 marks. The tests will be conducted centrally. The average of two such IA is calculated for 20 marks.
- Other Innovative Components will be for 5 Marks. The innovative component is for 5 marks, conducted during the class hours by the staff member/ in charge of the subject, in the form of assignments/ quiz/ seminars /presentations/Online/Open Book/Viva Voce/ Group work/ Mini Project/ Exhibition, etc. The topic and time for submission/ presentation will be announced by the staff member/ in charge of the subject in advance. Each student should explain and defend his/her presentation. For attendance 5 Marks are allotted.
- There is no passing minimum for IA.

Semester Examinations (SE)

- A student should register himself/herself to appear for the Semester Examinations by payment of the prescribed fee.
- The Semester Examinations will be in the form of a comprehensive examination covering the entire syllabus in each subject. It will be of 3 hours duration, with maximum 70 marks, irrespective of the number of credits allotted to it.
- Even though the candidate is absent for two IA exams/obtain zero marks, the external marks are considered (if he/she gets 40/70) and the result shall be declared as 'PASS'.
- The pass mark shall be 28 out of 70 in the Semester end examination.
- The maximum marks for each Paper shall be 100.

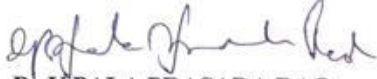
8. Discussed and recommended to organizing Seminars, Guest lectures, Workshops to enhance the knowledge of students besides conducting Certificate Courses on Spoken English, Soft Skills and Competitive English. It has been suggested that the Certificate Courses may be feasible to the students (interested students) of all disciplines of II years and the resource person may be a Guest Faculty to handle the classes regularly beyond the curriculum. All these recommendations are forwarded for the approval of the Academic Council.

9. Nil.

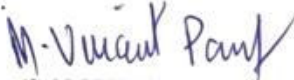
Signatures of the BOS Members:



Dr.E.DILEEP
(University Nominee)



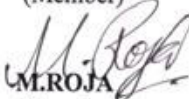
Dr.V.PALA PRASADA RAO
(Academic Council Nominee)



(Sri M.VINCENT PAUL)
(Academic Council Nominee)



B.BULLI BABU
(Member)



M.ROJA
(Member)

R.V.V. Aparna.

R.V.V.APARNA
(Member)

Dr.G.PRIYANK VARMA
(Member)

MEGHANA GRACE MICHAEL *Megha Gme.M 17/6/2020*
(Member)


Chairman

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Semester - I

COURSE STRUCTURE

ENGLISH PRAXIS COURSE-I

A COURSE IN COMMUNICATION AND SOFT SKILLS

Course Code	ENGT11B	Course Delivery Method	Class Room/ Blended Mode - Both
Credits	03	CIA Marks	30
No.of Lecture Hours / Week	4	Semester End Exam Marks	70
Total No.of Lecture Hours	60	Total Marks	100
Year of Introduction: 2020-21	Year of Offering: 2020-21	Year of Revision:	Percentage of Revision:
CLASS:	I YEAR DEGREE (ALL COURSES)		

Course objective:

The aim of this course is to improve the speaking skills of the learners in regard to the sound-spelling relationship of the language appears anarchic and to introduce the basic Grammar and Vocabulary as well as reading skills. Another problem that many Indian languages face is English Word Accent.

Course Outcomes:

By the end of the semester, the students can acquire linguistic competence to be able to compete with the globalised world and become successful in all the challenges that they face. On successful completion of the paper, the students are introduced to communicative skills, to define, classify, and understand the methods of communication, to improve their LSRW skills, to enable them to practice those skills in their daily life by identifying instances of communication in the circumstances of their own.

- Introduced the students to the speech sounds of English in order to enable them to listen to English and speak with global intelligibility
- Enabled the students to speak English confidently and effectively in a wide variety of situations.
- Helped the students to improve their writing efficiency by refining their writing strategies.

Academic Year 2020-21

Changes made in the syllabus

Semester-I General English

Course content suggested by APSCHE	Additions	Deletion
Unit – I Listening Skills 1. Importance of Listening 2. Types of Listening 3. Barriers to Listening 4. Effective Listening		
Unit-II Speaking Skills 1. Sounds of English: Vowels and Consonants 2. Word Accent 3. Intonation		
Unit-III Grammar 1. Concord 2. Modals 3. Tenses (Present/Past/Future) 4. Articles 5. Prepositions 6. Question Tags 7. Sentence Transformation (Voice, Reported Speech & Degrees of Comparison) 8. Error Correction		Nil
Unit-IV Writing 1. Punctuation 2. Spelling 3. Paragraph Writing		
Unit-V Soft Skills 1. SWOC 2. Attitude 3. Emotional Intelligence 4. Telephone Etiquette 5. Interpersonal Skills		
	Unit-IV Communicative and Competitive English 1. Names and Actions 2. Descriptions and Connections	

In Unit – VI of COMMUNICATIVE AND COMPETITIVE ENGLISH, the following topics

1. Names and Actions
2. Descriptions and Connections

are incorporated in the syllabus . These two topics focus on sensitizing the students to the aspects of the language through a series of activities to develop grammatical applications, vocabulary, listening, reading, writing and speaking skills. The objective is now, therefore, to enhance the communication skills in English by providing adequate opportunities to practice.

Since the **APSCHE** has revised the syllabus under CBCS framework with effect from **2020-2021**, the following syllabus for General English of Semester-I (English Praxis Course-I) titled '**A Course in Communication and Soft Skills**' shall be implemented for the admitted batch of the first year for this academic year 2020-21 with some minor changes. The topics: Paragraph Writing, SWOC and Interpersonal Skills have not been included in the Semester-I as the overloaded curriculum may lead to academic underperformance of the rural students. These topics shall be introduced and implemented in the II Semester. All these changes are brought to the notice of the BOS Members through mail /phone call and their consent is being taken.

English Syllabus-Semester-I
(English Praxis Course-I)
A Course in Communication and Soft Skills

Learning Outcomes

By the end of the course the learner will be able to:

- Use grammar effectively in writing and speaking.
- Demonstrate the use of good vocabulary.
- Demonstrate an understating of writing skills.
- Acquire ability to use Soft Skills in professional and daily life.
- Confidently use the tools of communication skills.

I. UNIT: Listening Skills

- a. Importance of Listening
- b. Types of Listening
- c. Barriers to Effective Listening

II. UNIT: Speaking Skills

- a. Sounds of English: Vowels and Consonants
- b. Word Accent
- c. Intonation

III. UNIT: Grammar

- a. Concord
- b. Modals
- c. Articles
- d. Prepositions
- e. Tenses (Present/Past/Future)
- f. Question Tags
- g. Sentence Transformation (Voice, Reported Speech & Degrees of Comparison)
- h. Error Correction

IV. UNIT: Writing

- a. Punctuation
- b. Spelling

V. UNIT: Soft Skills

- a. Positive Attitude
- b. Emotional Intelligence
- c. Telephone Etiquette

VI. UNIT: Communicative and Competitive English

1. Names and Actions
2. Descriptions and Connections

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ENGLISH	ENG PRAXIS 101C	2020-2021	B.A,B.Com & B.Sc
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Time: 3 hours

Max Marks: 70

The Pattern of the Question Paper for Semester – I: ENG PRAXIS 101C

Semester - I

I. Answer any ONE of the following questions in 150 words: **1x8 = 8M**
(3 Essay questions to be given)

II. Answer all the THREE questions:

1. Find the ODD Sound from the given options **5x1=5M**

OR

Write the phonemic symbol of the underlined letters of the given words.

2. Mark the stress for any FIVE of the given words. **5x1=5M**

(8 Words to be given)

3. Mark and name the tone for any FIVE of the given sentences. **5x1=5M**

(8 Sentences to be given)

III. Answer all the TEN questions:

1. Insert the correct word given in brackets : **½ x2=1M**

(4 Sentences to be given)

2. Select the modal form from the options that best completes the sentence. **½ x2=1M**

(4 Sentences to be given)

3. Choose an appropriate article given in brackets to complete the sentences **½ x3=1½M**

4. Select the correct preposition to complete the sentences.. **½ x3=1½M**

5. Fill in any FIVE of the blanks with suitable verb forms given in brackets. **5x1=5M**

(8 sentences to be given)

6. Add Question Tags to any FIVE of the following sentences. **5X1=5M**

(7 sentences to be given)

7. Convert any THREE of the following sentences into passive voice. **3X1=3M**

(5 sentences to be given)

8. Rewrite any THREE of the following sentences in indirect speech. **3x1=3M**

(5 sentences to be given)

9. Fill in the blanks with suitable degrees to the following words. **3x1=3M**

10. Correct any FIVE of the following underlined/italicized part of the sentences. **5x1=5M**

(7 sentences to be given)

IV. Rewrite the given paragraph, making corrections in spelling for the underlined words and the use of capitals and punctuation. **5M**

2 marks for Spelling (the given words must be underlined) and 3 marks for marking punctuation and the use of capitals.

V. Answer the TWO questions:

1. Answer any ONE of the following questions in 150 words: **1x8=8M**

(3 Essay questions to be given)

2. Write a telephone conversation for any ONE of the following contexts. **5M**

(2 Contexts to be given)

a) A conversation on different contexts and situations.

b) Fill in the blanks in the transcript of the telephone conversation with suitable responses and expressions.

(6 blanks to be filled in a given conversation)

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ENGLISH	ENG PRAXIS 101C	2020-2021	B.A,B.Com & B.Sc
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Time: 3 hours

Max Mark: 70

ENG PRAXIS 101C
Semester - I
Model Question Paper

I. Answer any ONE of the following questions in about 150 words. 1x8=8M

- a. 'Listen not only with your ears but also with your eyes.' Discuss.
- b. Name three barriers to effective listening and give examples of these from your own experiences.
- c. What is empathetic listening? Where is this kind of listening generally practiced?

II. Answer all the THREE questions:

1. Find the ODD Sound from the given options. 5x1=5M

- a. Flour, flower, flown
- b. Now, hope crown
- c. Mood, blood, food
- d. Said, paid, maid
- e. Seen, keep, beer

OR

Write the phonemic symbol of the underlined letters of the given words.

- a. Again
- b. Weather
- c. Pleasure
- d. Play
- e. Mouth

2. Mark the stress for any FIVE of the following words. 5x1=5M

- a. Again
- b. Confusion
- c. Engineer
- d. Behaviour
- e. Conduct(N)
- f. University
- g. College
- h. Omit

3. Mark and name the tone for any FIVE of the following sentences. 5x1=5M

- a. She is not my friend.
- b. When did you move to Vizag?
- c. What a pleasant surprise!
- d. Where is your bike?
- e. Do you play cricket?
- f. I want to go home.
- g. Please open the door for the guests.
- h. He didn't submit the project, did he?

III. Answer all the TEN questions:

1. Insert the correct word to any TWO of the sentences given in brackets : 1/2 x2=1M
 - a. Each of the sisters (**is / are**) clever.
 - b. The quality of the mangoes (**were / was**) not good.
 - c. The man, unlike the woman (**is / are**) here tonight.
 - d. Neither Hari nor Ravi (**have / has**) come.
2. Select any TWO of the modal forms from the options that best completes the sentence. 1/2 x2=1M
 - a. Ted's flight from Amsterdam took more than 11 hours. He **can/must** be exhausted after such a long flight.
 - b. Susan **might not/could not** hear the speaker because the crowd was cheering so loudly.
 - c. The passengers **must/could** wear their seat belts at all times.
 - d. I **can/may** play guitar very well.
3. Choose an appropriate article given in brackets to complete the sentences: 1/2 x3=1 1/2M
 - a. ____ (An/a) apple a day keeps the doctor away.
 - b. ____ (The/An) ink in my pen is red.
 - c. ____ (The/An) church on the corner is progressive.
4. Select the correct preposition to complete the sentences. 1/2 x3=1 1/2M
 - a. We cried to the man on the ladder, "Hang ____!".(on /out)
 - b. His performance has been ____ (under / below) average this year.
 - c. There are cherry trees all ____ (along / aside) the road.
5. Fill in any FIVE of the blanks with suitable verb forms given in brackets. 5x1=5M
 - a. The train _____ (leave) the station, before I reached there.
 - b. English _____ (speak) all over the world.
 - c. If he _____ (work) hard, he would have passed in first division.
 - d. Don't disturb me, I _____ (do) my homework.
 - e. Leela as well as Radha _____ (be) here.
 - f. Pooja _____ (sing) when I visited her.
 - g. My mother always _____ (cook) food.
 - h. If you go now you _____ (catch) the train.
6. Add Question Tags to any FIVE of the following sentences. 5X1=5M
 - a. She draws a beautiful picture, _____?
 - b. We came home late last night, _____?
 - c. No one will hear us, _____?
 - d. Your uncle goes jogging every day, _____?
 - e. The authorities will see to the problem, _____?
 - f. You came by train, _____?
 - g. He never drinks alcohol, _____?
7. Convert any THREE of the following sentences into passive voice. 3X1=3M
 - a. My sister will cook dinner tonight.
 - b. Give him some money
 - c. The doctor asked us many questions
 - d. Did you understand the lesson?
 - e. They called off the meeting.
8. Rewrite any THREE of the following sentences in indirect speech. 3x1=3M
 - a. You said to me, 'You must give me your email id'.
 - b. Sudha said to us, 'Let us go to the Upstate emporium today'.
 - c. Mohan said to me, 'Don't put your things here'.
 - d. I said to her, 'Will you teach me knitting?'
 - e. They said to me, 'Oh, we are delighted to be in your class!'

9. Fill in the blanks with suitable degrees to the following words.

3x1=3M

<u>POSITIVE</u>	<u>COMPARATIVE</u>	<u>SUPERLATIVE</u>
a.	More beautiful	Most beautiful
b. pretty		prettiest
c. bad	worse	

10. Correct any FIVE of the following underlined/italicized part of the sentences. 5X1=5M

- The news are good.
- My bicycle is inferior to your.
- The four men quarreled with each other.
- We went to Delhi in train.
- I prefer tea than coffee.
- Where is the scissors?
- He said that he is young.

IV. Rewrite the following paragraph, making corrections in spelling for the underlined words and the use of capitals and punctuation. 5M

may i have your attension please. Welcome one and all to our gallery's hundredth solo exhibition on this happy ocassion we are very pleased to present before you a truly remarkable set of paintings that are being exhibited for the first time.

V. Answer the TWO questions from 1&2 with internal choice:

1. Answer any ONE of the following questions in 150 words:

1x8=8M

- Write an essay on the benefits of positive attitude.
- What are some things you feel you can be more positive about in your present life? Why do you feel this way? What can you do to make yourself adopt a more positive attitude with regard to these things?
- Define Emotional Intelligence and discuss the qualities of emotionally intelligent people.

2. Write a telephone conversation for any ONE of the following contexts.

5M

- Write a telephone conversation between a hotel receptionist and a customer to get a reservation for a suite /room.

OR

- Fill in the blanks in the transcript of the telephone conversation with suitable responses and expressions.

Friend A: Hello, may I talk to Amish, I am his classmate Rohan.

Friend B: _____.

Friend A: How wonderful! You picked up the phone.

Friend B: _____.

Friend A: I just called to seek your help. You know I had been absent from school for so many days. So I want to be updated.

Friend B: Sure! Well, in English _____.

Similarly, in Math also we have done one and half chapters more. In social science, we have not done much as the madam herself was on leave. And on Monday is the test of Science, chapter 8.

Friend A: _____ I think as for the test, the teacher will exempt me as I was on leave.

Friend B: I think so. How was your trip to Europe?

Friend A: _____ I had a great fun travelling so many wonderful countries. OK. Thanks. See you on Monday.

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Semester - III
COURSE STRUCTURE

Academic Year	2020-21
Title of the paper	General English
Semester	III
Course code	ENG 301C
CIA marks	30
Semester End Marks	70
Total Marks	100
Year of Introduction	2017-18
Year of Revision	2019-20
% of revision	20%

Academic Year 2020-21
Changes made in the syllabus
III SEMESTER
GENERAL ENGLISH -III

Course content suggested by APSCHE	Additions	Deletion
<p>Unit – I PROSE 1. Shyness My Shield (Taken from <i>The Story of My Experiments with Truth</i>) - M.K. Gandhi 2. Aurangzeb’s Letter To His Teacher 3. A Letter From Abraham Lincoln To His Son’s Teacher</p> <p>Unit – II POETRY 1. Once Upon a Time - Gabriel Okara 2. Our Casuarina Tree - Toru Dutt</p> <p>Unit – III SHORT STORY 1. The Open Window – Saki (H.H.Munro) 2. The Beloved Charioteer - Shashi Deshpande</p> <p>Unit – IV ONE ACT PLAY <i>Kanyasulkam</i>, (Acts I & II) – Gurajada Apparao</p> <p>Unit – V LANGUAGE ACTIVITY 1. Classroom and Laboratory Activities i. JAM Sessions ii. Note Taking iii. Reporting for the Media iv. Expansion of an idea 2. Classroom Activity i. Information Transfer – Tables, Bar Diagrams, Line Graphs, Pie Diagrams, Flow Charts, Tree Diagrams and Pictures ii. Note Making iii. Writing for the Media</p>	<p>Unit-IV Communicative and Competitive English 1. Composition i. Use of passive structures to write reports ii. Recognize & write emails iii. Develop hints by farming sentences & write paragraphs iv. Read texts using higher order thinking skills (academic reading comprehension)</p>	<p>Nil</p>

In Unit – VI of COMMUNICATIVE AND COMPETITIVE ENGLISH, the topic **COMPOSITION** is incorporated in the syllabus. This topic focuses on sensitizing the students to improve one’s own writing skills.

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ENGLISH	ENG 301C	2020-2021	B.A,B.Com & B.Sc
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SEMESTER – III (CBCS)

PAPER – II

Year-II

Semester-III

Subject: General English

Year 2020-21

Unit – I

PROSE

1. Shyness My Shield (Taken from *The Story of My Experiments with Truth*) - M.K. Gandhi
2. Aurangzeb's Letter To His Teacher
3. A Letter From Abraham Lincoln To His Son's Teacher

Unit – II

POETRY

1. Once Upon a Time - Gabriel Okara
2. Our Casuarina Tree - Toru Dutt

Unit – III

SHORT STORY

1. The Open Window – Saki (H.H.Munro)
2. The Beloved Charioteer - Shashi Deshpande

Unit – IV

ONE ACT PLAY

Kanyasulkam, (Acts I & II) - Gurajada Appa Rao

Unit – V

LANGUAGE ACTIVITY

1. Classroom and Laboratory Activities

- i. JAM Sessions
- ii. Note Taking
- iii. Reporting for the Media
- iv. Expansion of an idea

2. Classroom Activity

- i. Information Transfer – Tables, Bar Diagrams, Line Graphs, Pie Diagrams, Flow Charts, Tree Diagrams and Pictures
- ii. Note Making
- iii. Writing for the Media

Unit – VI

COMMUNICATIVE AND COMPETITIVE ENGLISH

1. COMPOSITION

- i. Use passive structures to write reports
- ii. Recognize & write emails
- iii. Develop hints by framing sentences & write paragraphs
- iv. Read texts using higher order thinking skills (academic reading comprehension)

Note: In classroom instruction it may be ensured that the theoretical and practical components of CSS-II complement the language activity in this semester.

M. Venkatesh Paul

Megh G. N.

S. D. K.

**A.G & S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE, VUYYURU -
521165**
(An Autonomous College in the Jurisdiction of Krishna University, Machilipatnam.)
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ENGLISH	ENG 301C	2020-2021	B.A,B.Com & B.Sc
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The Pattern of the Question Paper for Semester – III: ENG 301C

Section - A

- I. Answer any TWO of the following in 75 words each.** **2x5 = 10**
(4 paragraph questions from Prose)
- II. Answer any TWO of the following in 75 words each.** **2x5 = 10**
(4 paragraph questions from Poetry)
- III. Answer any TWO of the following in 75 words each.** **2x5 = 10**
(4 paragraph questions from Short Story)
- IV. Answer any TWO of the following in 75 words each.** **2x5 = 10**
(4 paragraph questions from One-Act Play)

Section – B

(Language Activity)

- V. Read the following diagram and answer the questions that follow.** **5M**
(Table/Pie-Chart/Bar Graph/ Tree Diagram/ Flow Chart, etc.,)
- VI. Read the following passage and prepare a note.** **5M**
- VII. Describe the picture in not less than 5 sentences.** **5M**
(A picture to be given)
- VIII. Expand one of the following into a paragraph.** **5M**
(Three proverbs to be given)
- IX. Brainstorm one of the topics and show it in a diagram.** **5M**
(Three topics to be given)
- X. Develop the given ideas into a paragraph of 100 words.** **5M**

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ENGLISH	ENG 301C	2020-2021	B.A,B.Com & B.Sc
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Time: 3 hours

Max Mark: 70

Question Paper Model

Section – A

I. Answer any TWO of the following in about 75 words each.

2x5=10M

1. Write a note on Gandhi's last effort to make a public speech in England.
2. What was the result of Gandhi's attempt to speak at a meeting for the promotion of vegetarianism?
3. How is the teacher expected to inculcate honesty and worldly wisdom in the child according to Lincoln?
4. How does Aurangzeb pinpoint the lapses of his former teacher and what should Mullah Sahe have taught Aurangzeb?

II. Answer any TWO of the following in about 75 words each.

2x5= 10M

1. Why do you think the poet has used the title, 'Once Upon a Time'?
2. I have learned to wear many faces – Comment from your study of the poem 'Once Upon a Time'.
3. Why does the memory blind Toru Dutt with tears?
4. How does Dutt connect the tree to the memory of distant land?

III. Answer any TWO of the following in about 75 words each.

2x5= 10M

1. Describe how the title of the story "The Open Window" relates to the themes of the story itself.
2. Is Vera an antagonist or a protagonist? Explain.
3. Give an account of mother's nature and behaviour depicted in "My beloved Charioteer".
4. Explain the bond of mother and daughter in the context of "My beloved charioteer".

IV. Answer any TWO of the following in about 75 words each.

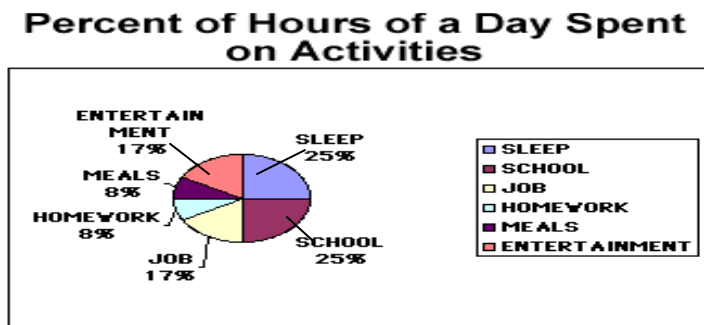
2x5= 10M

1. Talking to me itself is an education! – Explain with reference to your study of Kanyasulkam.
2. Write about Girisam's plan to go to the village of Venkatesam.
3. What were the books Venkatesam was asked to purchase?
4. Write a note on the English conversation between Girisam and Venkatesam.

Section – B

V. Read the following chart and answer the questions that follow.

5x1=5M



- a. Which two activities took up half of the time of the day?
- b. Which two activities took up the least amount of time?
- c. Which of the activities took up one fourth of the day?
- d. What percent of the day does homework take up?
- e. How many hours does the he spend in the school?

VI. Read the following passage and prepare notes.

5M

Early rising is the secret for a happy life. We all wish to live long but we cannot. We go against Nature. Nature likes us to work during day and to rest at night. But we do not obey this law of Nature. We do not go to bed early. We read or write late into night. Some of us keep playing, dancing and drinking whole night. So, we do not rise early. Our health breaks down and we fall ill. Nature takes revenge. We have to suffer for our disobedience. But birds and animals are healthy. They do not need a doctor every day. They sleep early and rise early. Early rising is the secret of health. But if you like to rise early, you must go to bed early. This simple habit will give everything. So, it is said: "Early to bed and early to rise makes a man healthy, wealthy and wise."

VII. Describe the picture in not less than 5 sentences.

5M



VIII. Expand one of the following into a paragraph.

5M

1. Where there is a will there is a way.
2. Slow and steady wins the race.
3. A friend in need is a friend in deed.

IX. Brainstorm one of the topics and show it in a diagram.

5M

1. Corruption 2. Yoga 3. Motherhood

X. Develop the ideas given below into a paragraph of 100 words.

5M

A sheperd's son – father goes out – asks son to look after sheep – son naughty – shouts wolf –other shepherds run to help – no wolf – boy says it was a joke – they go away – after some time – boy shouts again wolf – the shepherds come a second time – no wolf – they scold him and leave – wolf really comes – boy calls for help – none comes – wolf takes away sheep – father comes and shouts at the boy – moral.

**A.G&S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE
(AUTONOMOUS), VUYYURU**



DEPARTMENT OF ENGLISH

**BOARD OF STUDIES
MEETING**

COMMUNICATION SKILLS AND SOFT SKILLS

VENUE
ENGLISH LANGUAGE LABORATORY

DATE
12th June, 2020

Minutes of the meeting of Board of studies in the Foundation Courses titled "Communication Skills and Soft Skills" for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held on 12-06-2020 in the English Language Laboratory at 1:00 pm.

Ms G.Soni ... Presiding

Members Present:

- | | | |
|-------------------------------------|-----------------------------|---|
| 1).....
(G.SONI) | Chairman | Head, Department of English
AG & SG S Degree College
Vuyyuru-521165 |
| 2).....
(Dr.E.DILEEP) | University
Nominee | Professor,
Department of English
Krishna University,
Machilipatnam. |
| 3).....
(Dr.V.PALA PRASADA RAO,) | Academic Council
Nominee | Lecturer,
Department of English
JKC College, Guntur. |
| 4).....
(Sri M.VINCENT PAUL) | Academic Council
Nominee | Head,
Department of English
Sir C.R.Reddy College,
Eluru |
| 5).....
(B.BULLI BABU) | Member | Lecturer in English
A.G & S.G.S Degree College,
Vuyyuru-521165 |
| 6).....
(M.ROJA) | Member | Lecturer in English
A.G & S.G.S Degree College,
Vuyyuru-521165 |
| 7).....
(R.V.V.APARNA) | Member | Lecturer in English
A.G & S.G.S Degree College,
Vuyyuru - 521165 |
| 8).....
(Dr.G.PRIYANK VARMA) | Member | Assistant Professor,
Department of English,
SRM University,
Amaravati - A.P. |
| 9).....
(MEGHANA GRACE MICHEAL) | Member | Soft skills Trainer,
Payroll Officer, HSBC
HDPI, Hi-tech City,
Hyderabad. |

Agenda for B.O.S Meeting of the Foundation course in Communication Skills and Soft Skills for III SEMESTER for the Academic Year 2020-21

The following proposals are submitted as a part of the agenda for the consideration and approval of the honorable members of Board of Studies, at the meeting held on 12th June, 2020.

1. To recommend syllabi of CSS for 3rd semester of II Degree students of all disciplines for the Academic Year 2020-21.
2. To recommend the Model Question Paper of CSS for 3rd semester of II Degree of all disciplines for the Academic Year 2020-21.
3. To recommend the Guidelines to be followed by the question paper setters in CSS for the 3rd semester-end exams of II Year students of all disciplines.
4. To recommend the teaching and evaluation methods to be followed under Autonomous status.
5. Any suggestions regarding Certificate/Add-on Courses, Seminars, Workshops, Guest Lectures and student competitions to be organized.
6. Any other matter.

RESOLUTIONS

1. Discussed and recommended the syllabi of CSS for 3rd Semester of Second Degree of all disciplines for the approval of the Academic Council.
2. Discussed and recommended the model question papers of CSS for 3rd Semester of Second degree of all disciplines for the approval of the Academic Council.
3. Discussed and recommended the guidelines to be followed by the question paper setters of CSS for 3rd Semester of second degree students of all disciplines for the approval of the Academic Council.

[Note: A consolidated list of Vocabulary is enclosed for the use of the Question paper setters]

4. Discussed and recommended the following teaching and evaluation methods for approval of Academic Council.

Teaching methods:


Besides the conventional methods of teaching (The Direct Method, The Structural Approach), Grammar-Translation Method, Audio-lingual Method, Communicative Language Teaching (CLT), Task-Based Language Learning etc., are practiced. We use modern technology i.e. using of an LCD projector, display on U boards, you tube videos etc., for better understanding of concepts.

Evaluation of a student is done by the following procedure:

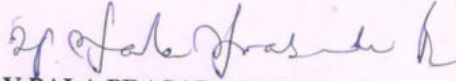
Semester-End Examinations:

- i) The maximum marks for Semester-End examinations shall be 50 marks and duration of the examination shall be 2 Hours.
 - ii) Semester-End examinations shall be conducted in theory papers at the end of every semester.
5. Discussed and recommended for organizing Seminars, Guest lectures, Work-shops to enhance the knowledge of students besides conducting Certificate Courses on Spoken English, Soft Skills and Competitive English. It has been suggested that the Certificate Courses may be feasible to the interested students of all disciplines of II years and the resource person may be a Guest Faculty to handle the classes regularly beyond the curriculum. All these recommendations have been forwarded for the approval of the Academic Council.
 6. The Department shall adapt the changes made by Krishna University and APSICHE if any, in the later period deviating by 20% which is admissible in autonomy.
 7. If any changes in CSS syllabus (CSS-I) are made by Krishna University/APSICHE, the same syllabus shall be incorporated as per the guidelines.

Signatures of the BOS Members:



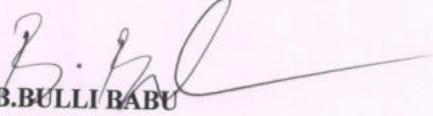
Dr.E.DILEEP
(University Nominee)



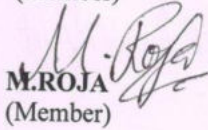
Dr.V.PALA PRASADA RAO
(Academic Council Nominee)



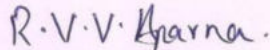
(Sri M.VINCENT PAUL)
(Academic Council Nominee)



B.BULLI BABU
(Member)



M.ROJA
(Member)



R.V.V.APARNA
(Member)

Dr.G.PRIYANK VARMA
(Member)

MEGHANA GRACE MICHAEL *Megha Grace.M 12/6/2020*
(Member)


Chairman

A.G & S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE, VUYURU

(An Autonomous College in the Jurisdiction of Krishna University, Machilipatnam.)

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CSS	CSS 301C	2020-2021	B.A.,B.Com &B.Sc
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B.A., B.Com. and B.Sc.

COMMUNICATION AND SOFT SKILLS

SYLLABUS

Semester - III

Unit I: Pronunciation - 1

The Sounds of English

Unit II: Pronunciation - 2

1. Word Accent
2. Intonation

Unit III: Speaking Skills -1

1. Conversation Skills
2. Interview Skills
3. Presentation Skills
4. Public Speaking

Unit IV: Speaking Skills -2

1. Role Play
2. Debate
3. Group Discussion

Unit V: Writing Skills

1. Spelling
2. Punctuation
3. Report Writing

Dr. J. S. S. Rao

M. S. S. Rao

S. S. S. Rao

M. S. S. Rao

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CSS	CSS 301C	2020-2021	B.A,B.Com & B.Sc
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Time: 2 hours

Max Mark: 50

The Pattern of the Question Paper for Semester – III: CSS 301C

- I. Identify the correct spelling to the given phonemic transcription from the choices given below.** (5 Transcriptions to be given) **5x1=5M**
- II. Write the Phonemic symbol of the underlined letters of the given words.** (5 words to be given) **5x1=5M**
- III. Mark the stress for any FIVE of the given words.** (8 Words to be given) **5x1=5M**
- IV. Mark the tone for any FIVE of the given sentences.** (8 Sentences to be given) **5x1=5M**
- V. Answer any TWO of the given questions.** **2x5=10M**
- A conversation on different contexts and situations. (5 lines to be written)
 - Fill in the blanks in the transcript of the interview with suitable responses and expressions. (5 blanks to be filled in a given conversation)
 - Write a paragraph in about 75 words of introducing someone by the student.
 - Prepare a brief speech to be delivered at a different occasion.
- VI. Answer any TWO of the given questions.** **2x5=10M**
- (1 question on Matching, 1 question on Debate, 2 questions on Group Discussion)
- Match the given expressions with the corresponding professions.
 - Prepare FIVE debate points for a given topic.
 - List out FIVE important skills needed in a group discussion.
 - List out any FIVE expressions one can use to perform different functions during a group discussion.
- VII. Rewrite the given paragraph, making corrections in spelling for the underlined words and the use of capitals and punctuation.** **5 M**
- 2 marks for Spelling (the given words must be underlined) and 3 marks for marking punctuation and the use of capitals.
- VIII. Write a report to the news paper on one of the following topics.** **5 M**
- (Three topics to be given)

CSS	CSS 301C	2020-2021	B.A,B.Com & B.Sc
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Time: 2 hours

MaxMark: 50

Model Question Paper

I. Identify the correct spelling to the following phonemic transcription from the choices given below. **5x1=5M**

- a) /bri:ð / - i) breathe ii) breath iii) breeze
b) /'keəfʊl/ - i) careful ii) clearful iii) cheerful
c) /'dɔ:tə/ - i) doctor ii) daughter iii) dot
d) /'dʒu:s/ - i) dues ii) zoo iii) juice
e) /'θɪŋk/ - i) think ii) thin iii) thing

II. Write the Phonemic symbol of the underlined letters of the following words. **5x1=5M**

- a) again
b) ring
c) sky
d) play
e) mother

III. Mark the stress for any FIVE of the following words. **5x1=5M**

- a) expensive
b) photographic
c) librarian
d) machine
e) employee
f) record
g) crowd
h) opposite

IV. Mark the tone for any FIVE of the following sentences. **5x1=5M**

- a) She is not my friend.
b) When did you move to Vizag?
c) What a pleasant surprise!
d) Where is your bike?
e) Do you play cricket?
f) I want to go home.
g) Please open the door for the guests.
h) He didn't submit the project, did he?

V. Answer any TWO of the following questions.

2x5=10M

- a) Write an imaginary conversation between a person and a bank official on opening an account in that particular bank in about five lines.
- b) Fill in the blanks in the transcript of the interview with suitable responses and expressions.

Candidate: _____ Come in, Sir?

Interviewer: Yes, Please Come in and _____.

Candidate: _____ you, Sir.

Interviewer: You are nearly at the end of your degree course in B.A, aren't you?

Candidate: _____, Sir _____.

Interviewer: What's _____? Colonial History?

Candidate: No Sir. It's modern Indian History. My subject covers the period from 1950 to 1970.

Interviewer: Are you interested in taking the UPSC examination?

- c) Write a paragraph in about 75 words introducing an artist at an art exhibition, hosted by your college.
- d) Prepare a brief speech to be delivered at a farewell function arranged for your seniors.

VI. Answer any TWO of the following questions.

2x5=10M

- a. Match the following expressions with the corresponding professions.

1. Teacher	a. Let's go to party.
2. Lawyer	b. Where do you want to go?
3. Doctor	c. You must complete the project by weekend.
4. Friend	d. How long have you been suffering?
5. Bus conductor	e. Can you please tell me how can I help you?

- b. Prepare FIVE debate points for the topic "The Media is responsible for violence in society".
- c. List out FIVE important skills needed in a group discussion.
- d. List out any FIVE expressions one can use to perform different functions during a group discussion.

VII. Rewrite the following paragraph, making corrections in spelling for the underlined words and the use of capitals and punctuation.

5 M

may i have your attension please. Welcome one and all to our gallery's hundredth solo exhibition on this happy ocassion we are very pleased to present before you a truly remarkable set of paintings that are being exhibited for the first time.

VIII. Write a report to the news paper on one of the following topics.

5M

- 1. Write report on Rain Water Harvesting.
- 2. Write a report on how health camp was carried out in your College/Village.
- 3. Write a news report on a road accident you witnessed.

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF HINDI

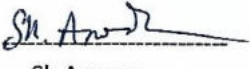




MINUTES OF BOARD OF STUDIES

ODD SEMESTER

16-07-2020

Minutes of the meeting of Board of Studies in Hindi for the Autonomous Courses of A.G & S.G Siddhartha Degree College of Arts & Science, Vuyyuru at 11.00AM on 16-07-2020 in the Department of Hindi through online.

Members Present:

1. 
Sk. Anwar Chairman Head of the Department of Hindi
AG & SGS Degree College
Of Arts & Science, Vuyyuru.
2. 
Dr. v. Mohana Rao University Representative Lecturer in Hindi,
SRR & CVR Govt. Degree College,
Vijayawada.
3. 
J. Rui Das Academic Council Nominee Lecturer in Hindi
PBN College, Nidubrolu,
Guntur (District)
4. 
Dr. G. V. Ratna Kumar Academic Council Nominee Lecturer in Hindi,
Hindu College,
Guntur.
5. 
Dilshad Begum Student's Representative Lecturer in Chemistry
AG & SGS Degree College of
Arts & Science, Vuyyuru

Agenda for BOS Meeting

1. To discuss about the syllabi, model question papers and guidelines of I & III semesters of I and II degree in Hindi for the academic year 2020-21.
2. To discuss about the change of question papers of I & III semesters for the academic year 2020-21.
3. To discuss about the I and III semester syllabus for the academic year 2020-21.

4. To discuss about the evaluation ratio 70:30 for the I, II & III semesters of I degree and II degree for the academic year 2020-21.
5. Any other matter.

Resolutions

1. It is unanimously resolved that there is no change in the syllabi I & III semester of I and II degree in Hindi for the academic year 2020-21.
2. It is unanimously resolved that there is no change in the model question papers I & III semesters of I degree in Hindi for the academic year 2020-21.
3. It is unanimously resolved that there is no change in the syllabus and the model question paper of III semester for the academic year 2020-21.
4. It is unanimously resolved to follow the evaluation ratio 70:30(External and Internal) for the I & II degree for the academic year 2020-21.
5. If the APSCHE or any higher Authority change the syllabus then we will incorporate Or modify the syllabus according to the instructions of the APSCHE or any higher Authority

S. Anwar

A.G. & S.G. SIDDHARTHA SCIENCE & ARTS DEGREE COLLEGE, VUYYURU
An Autonomous College in the jurisdiction of Krishna University, Machilipatnam

Hindi	Hindi - 101C	2020-2021	I Degree
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SYLLABUS FOR B.A., B.COM., B.Sc.

I Semester - Hindi

Text Book	Gadya Sandesh
1. गद्य संदेश (Prose)	साहित्य की महत्ता सच्ची वीरता मित्रता
2. कथा लोक (Non-detailed)	मुक्तिधन गूदड़ साई उसने कहा था
3. व्याकरण (Grammar)	लिंग वचन काल वाच्य वाक्यों की शुद्धि
4. व्याकरण (Grammar)	शब्द प्रयोग कार्यालयी हिन्दी (पारिभाषिक शब्दावली अंग्रेजी से हिन्दी) विलोम शब्द
5. पत्र लेखन (Letter Writing)	व्यक्तिगत और सरकारी पत्र

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An Autonomous College in the jurisdiction of Krishna University, Machilipatnam

Hindi	Hindi - 101C	2020-2021	I Degree
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MODEL QUESTION PAPER

Time : 3 Hours	I Semester	Max. Marks : 70
	Hindi	Min. Marks : 28

Section - A

1. *निम्न लिखित में से किन्हीं दो की संदर्भ सहित व्याख्या कीजिए।* 2 x 6= 12
 - A. शरीर का खाद्य भोजनीय पदार्थ है और मस्तिष्क का खाद्य साहित्य ।
 - B. वीर पुरुष का दिल सब का दिल हो जाता है,
उसका मन सबका मन हो जाता है ।
 - C. हमें उनका पल्ला उसी तरह पकडना चाहिए, जिस तरह सुग्रीव ने
राम का पल्ला पकडा था ।
 - D. अपनी भाषा का साहित्य ही जाति और स्वदेश की उन्नति का साधक है ।
2. *निम्न लिखित गद्यांशों में से किसी एक पाठ का सारांश लिखिकर उसकी विशेषताओं पर प्रकाश डालिए ।* 12
 - A. साहित्य की महत्ता
 - B. मित्रता
3. *निम्न लिखित कहानियों में से किसी एक कहानी का सारांश लिखिकर उसकी विशेषताओं पर प्रकाश डालिए ।* 12
 - A. गूदड साई
 - B. उस ने कहा था
4. *निम्न लिखित में से किसी एक की टिप्पणी लिखिए ।* 8
 - A. रहमान
 - B. लहनासिंह

Section - B

सूचना के अनुसार बदलिए ।

5. निम्न में से किन्हीं चार का लिंग बदलिए । 4x1= 4
 - A. शेर
 - B. सुनार
 - C. तपस्वी
 - D. भिखारी
 - E. मालिक
 - F. मोर
 - G. सदस्य
 - H. छात्र

6. निम्न में से किन्हीं चार का वचन बदलिए । 4 x 1 = 4
- A. स्त्री B. गुडिया C. पुस्तक D. लिपि
E. कपडे F. धातुएँ G. अध्यापिका H. डाकू
7. किन्हीं पाँच का विलोम शब्द लिखिए । 5 x 1 = 5
- A. इहलोक B. कृतज्ञता C. आकाश D. राजा
E. असत्य F. रात G. अंधकार H. ज्ञान
I. पुण्य J. उत्थान
8. सूचना के अनुसार बदलिए । 3 x 1 = 3
- A. कृष्ण कंस को मारता है । (भूतकाल में बदलिए)
B. सीता पाठ पढ़ेगी । (वर्तमानकाल में बदलिए)
C. गोपाल ने आम खाया । (भविष्यत काल में बदलिए)

Section - C

9. हिन्दी में अनुवाद कीजिए । 3 x 1 = 3
- A) Accommodation B) Administration
C) Authorised D) Casual
E) Circular F) Counter signature
10. निम्न लिखित में से किसी एक पत्र लिखिए । 7
- A. नौकरी के लिए आवेदन पत्र लिखिए
अथवा
B. परीक्षा शुल्क माँगते हुए अपने पिताजी के नाम एक पत्र लिखिए ।

* * *

A.G. & S.G. SIDDHARTHA SCIENCE & ARTS DEGREE COLLEGE, VUYYURU
An Autonomous College in the jurisdiction of Krishna University, Machilipatnam
Guidelines for I semester Hindi question paper for the Academic year 2020-2021.

Time : 3 Hours

HIN - 101C

Max. Marks : 70

Min. Marks : 28

GUIDE LINES

Note : The question paper setters are requested to

- I. Keep the assignment strictly confidential.
- II. Please go through the syllabus and the model question paper supplied.

Section - A

- Q. 1 4 Annotations to be set from prose text book
lessons out of which 2 questions to be answered. 2 x 6=12
- Q. 2 2 essays to be set from prose text book out of which 1 to be answered. 1 x 12=12
- Q. 3 2 stories to be set from Non-detailed book out of which 1 to be answered. 1 x 12=12
- Q. 4 2 short questions to be set from Non-detailed book out of which 1 to be answered. 8

Section - B

Grammar

- Q. 5 Change the gender : 8 words to be set, out of which 4 to be answered. 4 x 1=4
- Q. 6 Change of (Vachan) (Singular and plural) 4 x 1=4
- Q. 7 Vilom shabd : 10 words to be set, out of which (Antonyms) 5 to be answered. 5 x 1=5
- Q. 8 Change the sentences : 3 sentences to be set 3 to be answered. 3 x 1=3

Section - C

Translation and letter writing

- Q. 9 Translation : English to Hindi from the syllabus.
6 words to be set out of which 3 to be answered. 1 x 3=3
- Q. 10 Letter writing : Personal and official.
2 letters to be set out of which 1 to be answered. 7

I Semester

English to Hindi

Absence	-	अनुपस्थिति / गैरहाजिरी
Acceptance	-	स्वीकृति
Accommodation	-	आवास
Acknowledgment	-	पावती
Ad-hoc	-	तदर्थ
Administration	-	प्रशासन
Affidavit	-	शपथ पत्र
Agreement	-	करार
Allotment	-	आबंटन
Allowance	-	भत्ता
Annexure	-	परिशिष्ट
Authorised	-	प्राधिकृत
Bilateral	-	द्विपक्षीय
Bipartite	-	उभयलक्षी
Bonafide	-	वास्तविका / यथार्थ
Casual leave	-	आकस्मिक छुट्टी
Charge sheet	-	आरोप पत्र
Circular	-	परिपत्र
Clarification	-	स्पष्टीकरण
Confidential	-	गोपनीय
Consolidated	-	समेकित
Counter signature	-	प्रति हस्ताक्षर
Dearness allowance	-	महँगाई भत्ता

A.G. & S.G. SIDDHARTHA SCIENCE & ARTS DEGREE COLLEGE, VUYYURU
An Autonomous College in the jurisdiction of Krishna University, Machilipatnam

Hindi	Hindi - 301 C	2020-2021	II Degree
Syllabus for B.A., B.Com., B.Sc			
III Semester - Hindi			

पाठ्य पुस्तक	=	काव्य दीप
A) पुरानी कविता	=	1. कबीरदास साखी 2. सूरदास का बाल वर्णन
B) आधुनिक कविता	=	1. मातृभूमि 2. तोडती पत्थर 3. मातृभाषा के प्रति
C) हिन्दी साहित्य का इतिहास	=	भक्तिकाल 1. ज्ञानाश्रयी शाखा- कबीरदास 2. प्रेमाश्रयी शाखा - जायसी
D) सामान्य निबंध	=	1. सामाचार पत्र 2. बेकारी की समस्या 3. कंप्यूटर 4. पर्यावरण और प्रदूषण 5. साहित्य और समाज
E) अनुवाद	=	अंग्रेजी से हिन्दी 5 sentences from prescribed text book
F) कार्यालय हिन्दी	=	1. परिपत्र 2. ज्ञापन 3. सूचना

A.G. & S.G. SIDDHARTHA SCIENCE & ARTS DEGREE COLLEGE, VUYYURU
An Autonomous College in the jurisdiction of Krishna University, Machilipatnam

Hindi	Hindi - 301 C	2020-2021	II Degree
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MODEL QUESTION PAPER

Time : 3 Hours	III Semester	Max. Marks : 75
	Hindi	Pass Mark : 30

1. **निम्न लिखित पद्यांशों में से किसी एक की सप्रसंग व्याख्या कीजिए ।**

1 x 10 = 10

A) पाहन पूजे हरिमिलै, तो मैं पूजूँ पहार ।
ताते ये चाकी भली, पीस खाय संसार ॥
अथवा

B) सोभित कर नवनीत लिए ।
घुटुरुनि चलत रेनु-तन-मंडित, मुख दधि लेप किए ।
चारु कपोल, लोल लोचन, गोरोचन तिलक दिए ।
लट-लटकनि मनमत्त मधुप-गत मादक मधुहिं पिए ।

2. **निम्न लिखित पद्यांशों में से किसी एक की सप्रसंग व्याख्या कीजिए ।**

1 x 10 = 10

A) उन्नति पूरी है तब हि जब घर उन्नति होय ।
निज शरीर उन्नति किय, रहत मूढ सब कोय ॥
निज भाषा उन्नति बिना कबहुँ न हौ हैं सोच ।
लाख उपाय अनेक यों भले करो किन कोय ॥
अथवा

B) पालन - पोषण और जन्म का कारण तूही,
वक्षस्थल पर हमें कर रही धारण तू ही ।
अभ्रंकश प्रासाद और ये महल हमारे ।
बने हुए हैं अहो! तुझी से तुझ पर सारे ।

3. **किसी एक कविता का सारांश लिखिए ।**

1 x 13 = 13

A) तोडती पत्थर
अथवा

B) मातृभाषा के प्रति

4. *किसी एक साहित्यिक विषय पर विश्लेषणात्मक निबंध लिखिए ।* 1 x 13=13
- A) ज्ञानाश्रयी शाखा के बारे में वर्णन करते हुए कबीर का स्थान निर्धारित कीजिए ।
- अथवा
- B) प्रेमाश्रयी शाखा के बारे में वर्णन करते हुए जायसी का स्थान निर्धारित कीजिए ।
5. *किसी एक विषय पर निबंध लिखिए ।* 1 x 9=9
- A) समाचार पत्र
B) बेकारी की समस्या
C) पर्यावरण और प्रदूषण
6. *निम्न लिखित में से किसी एक का उत्तर दीजिए ।* 1 x 5= 5
- A) सूरदास
B) सूर्यकान्त त्रिपाठी 'निराला'
7. *हिन्दी में अनुवाद कीजिए ।* 1 x 5= 5
- A) As soon as he reached the station, the train left.
B) Swamy Vivekananda was a great saint.
C) Kabirdas travelled through out the country.
D) There is a temple behind the tree.
E) Kalidas is known as the Shakespeare of India.
8. *निम्न लिखित में से किसी एक की टिप्पणी लिखिए ।* 1 x 5= 5
- A) परिपत्र
B) ज्ञापन
C) सूचना

A.G. & S.G. SIDDHARTHA SCIENCE & ARTS DEGREE COLLEGE, VUYYURU
An Autonomous College in the jurisdiction of Krishna University, Machilipatnam
Department of Hindi
II Degree - III semester
Guidelines for the question paper setter

Time : 3 Hours

HIN - 301 C

Max. Marks : 75

Pass Marks : 30

Note : The question paper setters are requested to

I. Keep the assignment strictly confidential.

II. Please go through the syllabus and the model question paper supplied.

1. Two annotations to be set from old poetry lessons of which one question to be answered. 1 x 10=10
2. Two annotations to be set from modern poetry lessons of which one question to be answered. 1 x 10=10
3. Two essays to be set from modern poetry lessons of which one to be answered. 1 x 15=15
4. Two essays to be set from history of hindi literature of which one to be answered. 1 x 15=15
5. Three general essays to be set, one to be answered. 1 x 10=10
6. Two short questions to be set one from old poetry and one from modern poetry one to be answered. 1 x 5=5
7. Translation from English to Hindi. 1 x 5=5
5 simple sentences to be set 5 to be answered. - No choice.
8. Three short questions to be set from prayojan moolak hindi one question to be answered. 1 x 5=5

* * *

III Semester

English to Hindi

1. The temple is on the bank of the Tree.
2. Mother land is the mother of all mothers.
3. Service to man is service to god.
4. Although he is poor, yet he is honest.
5. As soon as he reached the station, the train left.
6. The murderer was caught red-handed.
7. Religion is the foundation of human society.
8. Milk contains all essential nutrients.
9. A scholar is respected every where.
10. Contentment is greatest happiness.
11. Trees keep the atmosphere cool.
12. A book is treasure house of knowledge.
13. India is a secular and socialistic country.
14. The cow gives milk.
15. He is a poor, but not thief.
16. Peacock is the beautiful bird.
17. Beauty is truth.
18. Rama has eaten bread.
19. We have to read news papers daily.
20. Rama is taller than Krishna.
21. Swamy Vivekananda was a great philosopher.
22. We must respect our elders.
23. Most of people of our country live in villages.
24. Be grateful to your parents.
25. Kalidas is known as the Shakespeare of India.

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SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF HISTORY

MINUTES OF BOARD OF STUDIES

ODD SEMESTER

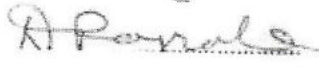


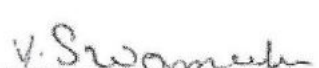

13-07-2020

Minutes of the meeting of the Board of Studies in History of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 11.30 A.M ON 13.07.2020 In the Department of History.

(Through Online mode meeting due to Covid-19 pandemic situation)

Dr. D. RAJYA LAKSHMI, HOD, History has presided over the BOS meeting

Members Present:

- 1)  Chairman Head, Department of History
(Dr. D. RAJYA LAKSHMI) AG & SG S Degree College of Arts
& Science Vuyyuru-521165
- 2)  University Head, Department of
(DR.G. Beulah Pearl Sunanda) Nominee History & Tourism
Marris Stella College, Vijayawada.
- 3)  Academic Council Head, Department of History &
(Prof.S. Murali Mohan) Nominee Archeology, Acharya Nagarjuna
University, Guntur.
- 4)  Academic Council Head, Department of History
(Sri. V. Swamulu) Nominee Sir C. R. Reddy College
Eluru, W.G.Dist.
- 5)  Alumni Lecturer in Success College, Vuyyuru
(Sri. K. Kiran) Nominee

AGENDA

1. To recommend any changes to the syllabi in 1st, 3rd, 5th Semesters of 1st, 2nd 3rd Year B.A. History Papers for Academic Year 2020-2021.
2. To recommend the Blue Print and Model Question Papers of 1st 3rd and 5th Semesters of Degree B.A papers for the Academic Year 2020-2021.
3. To recommend the guidelines to be followed by the Question Paper Setters in History for the 1st 3rd and 5th Semester-end exams.
4. To recommend the teaching and evaluation methods to be followed under Autonomous Status.
5. To suggest innovative methods of teaching.

RESOLUTIONS

1. Discussed and recommended syllabi for 1st Semester as per APSHE, Discussed and recommend the syllabi without changes for the 3rd, 5th Semesters of 2nd & 3rd Year B.A. as it is of 2019-2020 Academic Year syllabi for 2020-2021.
2. Discussed and recommended the syllabi of 1st 3rd and 5th semesters of Degree B.A for the Academic Year 2020-2021.
 - a) Semester-I(HIS 101C): Paper- I. Ancient Indian History & Culture (From Indus Valley Civilization to 13th Century AD.) As recommended by APSHE.
 - b) Semester-III(HIS301C):Paper-III. Late Medieval & colonial History of India (From 1526-1857 AD.)
 - c) Semester-V(HIS 501C & HIS 502C)Paper-V,VI. Age of Rationalism and Humanism – The World Between 15th&18th Centuries, History & Culture of Andhra Desa(From 12th Century to 19th Century).

Discussed and recommended the model question papers of 1st 3rd and 5th semesters of B.A Degree.

3. Discussed and recommended the guidelines to be followed by the question paper setters of History for 1st 3rd and 5th semesters B.A Degree.
4. Discussed and recommended the following teaching and evaluation methods:
 - A) **Teaching methods :**

Besides the conventional methods of teaching, it is also resolved to use various other methods like group discussions, quiz, develop lessons for power point presentations etc, for the better understanding of contents.
 - B) **Evaluation of a student is done by the following procedure :**
 - a) **Internal Assessment Examinations:**
 - i) Out of maximum 100 marks in each paper, 30 marks shall be allocated for internal assessment. 1st 2nd 3rd 4th 5th & 6th Semesters of 1st 2nd 3rd BA.
 - ii) Out of these 30 marks, 20 marks are allocated for internal tests and 5 marks for Assignments. The two tests will be conducted and average of these two tests shall be deemed as the marks obtained by a student, and remaining 5 marks are allocated for attendance under CBCS pattern.
 - b) **Semester – End Examinations:**
 - i) The maximum marks for Semester-End examinations shall be 70 for IBA, IIBA and IIIBA, and duration of the examination shall be 3 Hours.
 - ii) Semester-End examinations shall be conducted at the end of every semester.
5. Discussed and recommended for organizing Seminars, Guest lectures, and Workshops to upgrade the knowledge of students and to impart new skills of learning as frequently as possible.
6. And resolved to adopt changes made by APSHE. And adopted Syllabi for 1st semester according to APSHE for 2020-2021 Academic year.


Chairman

13/7/2020

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE VUYYURU,
A.P – 521165
(AN AUTONOMOUS COLLEGE IN THE JURISDICTION OF KRISHNA
UNIVERSITY, MACHILIPATNAM)

CLASS: I B.A SEMESTER – I (CBCS) PAPER-I
SYLLABUS: HISTORY Title of the Paper: ANCIENT INDIAN HISTORY &
CULTURE

(From Indus Valley Civilization to 13th Century A.D)

Paper Code: HIS 101C

(W.e.f. 2020-2021)

Max Marks 70

Pass Marks 28

No. of Hours per week: 5

No. of Credits: 4

UNIT -1

Survey of Sources –Literary Sources – Archaeological Sources, Ancient Indian Civilization(From Circa 3000 BC to 6th C.BC) Indus Valley Civilization: Salient Features, Vedic Age –Society, Polity, Economy, Culture during early and later Vedic Period. (20 Hrs)

UNIT –II

Ancient Indian History & Culture (6th Century BC to 2nd Century AD):Doctrines and Impact of Jainism – Buddhism :Mauryan Administration, Society, Economy & Culture-Ashoka's Dhamma, Kanishka's Contribution to Indian Culture. (15 Hrs)

UNIT-III

History & Culture of South India(2nd Century BC to 8th Century AD):Sangam Literature, Administration, Society, Economy and Culture under Satavahanas Cultural Contribution of pallavas.(20 Hrs)

UNIT-IV

India from 3rd Century AD to 8th Century AD: Administration, Society, Economy , Religion, Art, Literature and Science &Technology under Guptas – Samudra Gupta, Cultural contribution of Harsha: Arab Conquest of Sind and its Impact.(20 Hrs)

UNIT-V

History & Culture of South India (9th Century AD to 13 Century AD): Local Self Government of Cholas: Administration, Society, Economy and Culture under Kakatiyas-Rudrama Devi. (15 Hrs)

References:

1. A.L. Basham, The Wonder That Was India
2. D.N.Jha, Ancient India
3. D.D.Kosambi, An Introduction to the Study of Indian History
4. D.P.Chattopadhyay, Science and Society in Ancient India
5. B.N.Mukherjee, The Rise and Fall of the Kushana Empire
6. K.A. NilakanthaShastri, A History of South India
7. R.C.Majumdar, K.K.Dutta&H.C.RoyChowdhuri (ed.), Advanced History of India
8. Kumkum Roy, The Emergence of Monarchy in North India: eighth to fourth centuries BC
9. RomilaThapar (et. al). India: Historical Beginnings and the Concept of the Aryan
10. M.L.K. Murthy, *Pre-and Protohistoric Andhra Pradesh upto 500 B.C.*, New Delhi, 2003
11. K. Sathyanarayana, A Study of the History and Culture of Andhras

Mandatory Co-Curricular Activity:

Map pointing should be a compulsory activity as it helps student to understand vividly and clearly than the text and **should be made part of Examination by allotting marks for this skill-based activity.**

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UNIVERSITY, MACHILIPATNAM)**

CLASS: I B.A SEMESTER – I(CBCS) PAPER-I
Model Paper: HISTORY Title of the Paper: ANCIENT INDIAN HISTORY
& CULTURE
(From Indus Valley Civilization to 13th Century A.D) **Pass Marks 28**
Paper Code: HIS 101C (W.e.f. 2020-2021) **Max Marks 70**

SECTION – A

ANSWER ANY TWO OF THE FOLLOWING **5X2=10**
(Map pointing is Compulsory attempted Question)

1. Gandhara Art
2. Narasimha Varma – I
3. Mark the following places in India Map
a. Prayag b. Ujjaini c. Sanchi d. Kalinga e. Kanchi

(OR)

4. Mark the Gupta Empire and Following places in India Map
a. Malva b. Pataliputra c. Tamralipi d. Nalanda

SECTION– B

ANSWER ANY FOUR OF THE FOLLOWING **4X15=60**

5. Describe the main features of Indus Valley civilization
6. Explain the Conditions of Vedic Culture.
7. What are the teachings of Mahaveera
8. Bring out the salient features of Mauryan Administration
9. Briefly describe the socio-economic conditions under Satavahanas
10. Examine the Socio, Economic, Literary conditions of Sangam Age
11. Write about the achievements of Samudragupta.
12. Analyse the Socio-Economic conditions of Kakatiyas.

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
VUYYURU, A.P. – 521165
(An Autonomous College in the Jurisdiction of Krishna University, Machilipatnam)

SUBJECT- History	HIS 101C	I B.A
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TITLE: ANCIENT INDIAN HISTORY AND CULTURE
(From Indus Valley Civilization to 13th Century A.D)

Semester – I

Guidelines to the Paper Setter

Section	Unit – I	Unit – II	Unit – III	Unit - IV	Unit-V
A 5 Marks Questions	-	1	1	1	1
B 15 Marks Questions	2	2	2	1	1
Weightage	30	35	35	20	20

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE VUYURU, A.P-
521165

(AN AUTONOMOUS COLLEGE IN THE JURISDICTION OF KRISHNA
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CLASS: II B.A SEMESTER – III (CBCS) PAPER-III
SYLLABUS: HISTORY Title of the Paper: LATE MEDIEVAL & COLONIAL
HISTORY
OF INDIA

Paper Code: HIS 301C	(From 1526 -1857A.D)	Pass Marks 28
No.of Hours per week:5	(W.e.f. 2020-2021)	Max Marks 70
	No. of Credits:4	

Unit – I

India from 1526 _1707AD .Emergence of Mughal empire -Sources – Political condition in India on the eve of Babur Invasions.Brief summary of Mughal polity –SherSha- Sur Interregnum Expansion& Consolidation –of Mughal Empire.(25hours)

Unit – II

Administration – Economy-Society –Cultural Developments Under Mughals .Dis Integration of Mughals –Rise of Marathas- Peshwas.
(20hours)

Unit – III

Advent of European powers – Portuguese, Dutch, English and French. Expansion and consolidation of British Empire – Wars – diplomacy – Policies pursued – Subsidiary Alliance – Doctrine of Lapse. (20hours)

Unit – IV

Economic Policies and Changes – Mercantilism and Free – Trade Policies – Land Revenue Settlements – Permanent – Ryotwari – Mahalwari Systems – Integration Commercialization of Agriculture – Condition of Peasants – Famines – Decline of Cottage Industries (de-industrialization). (15hours)

Unit – V

Anti-Colonial Upsurge-Peasant and Tribal Revolts – 1857 Revolt-Causes: Results and Nature MangalPande, Bahadur Shah – II, Tantiyatope , Jhansi Lakshmi Bai, Nanasaheb.(15hours)

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
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(An Autonomous College in the Jurisdiction of Krishna University, Machilipatnam)

SUBJECT- History	HIS 101C	I B.A
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TITLE: ANCIENT INDIAN HISTORY AND CULTURE
(From Earliest Times to 600 A.D)

Semester – I

Guidelines to the Paper Setter

Section	Unit – I	Unit – II	Unit – III	Unit - IV	Unit-V
A 5 Marks Questions	1	-	1	1	1
B 15 Marks Questions	1	2	2	2	1
Weightage	20	30	35	35	20

References:

1. R.C. Majumdar, H.C.-Rayachandhuri&Kalikinkardatta, An Advanced History of India Part-II – Medieval India.
2. L.P. Sharma, The Mughal Empire, New Delhi, 1988.
3. L.P. Sharma, History of Medieval India, 1000 – 1740 A.D. 2nd ed. (1987)
4. C.A. Bayly, Indian Society and the Making of the British Empire.
5. Rajat K Ray, ed, Entrepreneurship and Industry in India, 1800-1947.
6. Bipan Chandra, Rise and growth of Economic Nationalism in India.
7. Bipan Chandra, K.N. Panikkar, Mildula Mukherjee,
8. Suchetra Mahajan&Adithya Mukharjee, India's struggle for Independence.
9. P.C. Joshi, Rebellion 1857: A Symposium.
10. J.F. Richards, The Mughal Empire
11. Irfan Habib, Agrarian system of Mughal India, 1526-1707
12. Ashin Das Gupta, Indian Merchants and the Decline of Surat 1700-1750.
13. Stewart Gordon, The Marathas 1600-1818.
14. Ebba Koch, Mughal Art and Imperial Ideology.
15. Satish Chandra, Essays on Medieval Indian History
16. Muzaffar Alam and Sanjay Subramanian, eds, The Mughal state, 1526-1750.
17. Andre Wink, Land and Sovereignty in India.
18. Harbans Mukhia, The Mughals of India.

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521165

(AN AUTONOMOUS COLLEGE IN THE JURISDICTION OF KRISHNA
UNIVERSITY, MACHILIPATNAM)

CLASS: II B.A

SEMESTER – III (CBCS)

PAPER-III

SYLLABUS: HISTORY Title of the Paper: INDIAN HISTORY AND CULTURE
(From 1526 -1857 A.D)

Paper Code: HIS -301C

(W.e.f. 2020-2021)

Max Marks 70

Pass Mark: 28

Model Question Paper

SECTION - A

ANSWER ANY TWO OF THE FOLLOWING

2X5=10

- 1 .Nurjahan
- 2.Mansabdari System
- 3 .Subsidiary Alliance
- 4.Regulating Act

SECTION -B

ANSWER ANY FOURE OF THE FOLLOWING

4X15=60

5. Describ the Achievements of Babur.
- 6 .Bring out the salient features of Mughal Administration.
7. How did Shivaji establish an Independent Maratha Empire
8. Discuss the greatness of Robert Clive.
9. Describe about the Doctrine of Lapse.
10. Write about the Land Revenue settlements adopted by the British.
11. Assess how the Indian Economy was ruined under the British rule .
12. Analyse the causes for the outbreak of 1857 Revolt.

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SUBJECT- History	HIS 301C	II B.A
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TITLE: INDIAN HISTORY AND CULTURE
(From 1526-1857 A.D)

Semester – III

Guidelines to the Paper Setter

Section	Unit – I	Unit – II	Unit – III	Unit - IV	Unit-V
A 5 Marks Questions	1	1	1	1	-
B 15 Marks Questions	1	2	2	2	1
Weightage	20	35	35	35	15

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A.P- 521165**

**(AN AUTONOMOUS COLLEGE IN THE JURISDICTION OF KRISHNA
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III BA History Syllabus:: Semester – V (CBCS) Paper – V

**Title of the Paper – Age of Rationalism and Humanism –The World Between 15th & 18th
Centuries.**

Paper Code; HIS-501C (w .e. f. 2020 - 2021)

No.of Hours per week:5 No.of Credits:4

Unit – 1

Feudalism -Geographical Discoveries: Causes – Compass & Maps – Portugal Leads
and Western World Follows – Consequences;

Unit – II

The Renaissance Movement: Factors for the Growth of Renaissance – Characteristic
Features - Transformation from Medieval to Modern World; Reformation & Counter
Reformation Movements: The Background – Protestantism – Spread of the
Movement– Counter Reformation– Effects of Reformation

Unit - III

Emergence of Nation States: Contributory Factors - England and other Nation States
– Impact due to the Emergence of Nation States.; Age of Revolutions: The Glorious
Revolution (1688) – Origin of Parliament – Constitutional Settlement – Bill of Rights
– Results

Unit – IV

Age of Revolutions: The American Revolution (1776) – Opening of New World –
Causes – Course – Declaration of Independence, 1776 – Bill of Rights, 1791 – Significance.

Unit – V

Age of Revolutions: The French Revolution (1789) – Causes - Teachings of
Philosophers - Course of the Revolution – Results

References:

- 1 Burke, Peter, the Renaissance
- 2 C.J.H. Hayes, Modern Europe up to 1870
- 3 C.D. Hazen, Modern Europe up to 1945
- 4 Christopher Hill, From Reformation to Industrial Revolution
- 5 Elton, G.R., Reformation Europe, 1517-1559
- 6 Ferguson, the Renaissance
- 7 Gilmore, M.P., the World of Humanism, 1453-1517
- 8 Hilton, Rodney, Transition from Feudalism to Capitalism
- 9 J.H.Parry, the Age of Renaissance
- 10 J.N.L. Baker, History of Geographical Discoveries
and Explorations
- 11 the New Cambridge Economic History of Europe, Vol. I, VII.

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**(AN AUTONOMOUS COLLEGE IN THE JURISDICTION OF KRISHNA
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III BA.Semester – V (CBCS) Paper – V

Subject; History

**Title of the Paper – Age of Rationalism and Humanism –The World
Between 15th & 18th Centuries.**

Paper Code ; HIS-501C
Time : 3Hrs

(w .e. f 2020 - 2021)

Pass Marks: 28
Max. Marks : 70

Model Question Paper

SECTION – A

Answer any TWO of the following

2x5=10

1. Geographical Discoveries
2. Counter Reformation
3. Boaston Tea Party
4. Reign of Terror

SECTION – B

Answer any FOURE of the following

4x15=60

5. Analyse the features Feudalism
6. Explain the important features of Renaissance
7. What is Reformation Movement and its significance
8. Describe the causes for the emergence of Nation States
9. Give a brief account of Glorious Revolution
10. Discuss about the causes of American Revolution
11. Write an essay on causes for the French Revolution
12. Estimate the rule of Directory in France.

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SUBJECT- History	HIS 501C	III B.A
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TITLE: Age of Rationalism and Humanism –The World Between 15th& 18th Centuries.

Semester – V

Guidelines to the Paper Setter

Section	Unit – I	Unit – II	Unit – III	Unit - IV	Unit-V
A 5 Marks Questions	1	1	-	1	1
B 15 Marks Questions	1	2	2	1	2
Weightage	20	35	30	20	35

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(AN AUTONOMOUS COLLEGE IN THE JURISDICTION OF KRISHNA UNIVERSITY, MACHILIPATNAM)

III BA. Semester – V (CBCS) Paper – VI

Subject:: History : Syllabus - Title of the Paper – History & Culture of Andhra Desa (from 12th to 19th Century A.D)

Paper Code : HIS-502C (w .e. f 2020 - 2021)

No.of Hours per week:5 No.of Credits:4

Unit – 1

Andhra during 12th& 13th Centuries A.D.: Kakatiyas – Origin & its Antecedents – Administration – Social & Economic Life – Industries & Trade - Promotion of Literature and Culture – Architecture & Sculpture – Decline; The Age of Reddy Kingdoms: Patronage to Literature – Trade & Commerce.

Unit – II

Andhra between 14th & 16th Centuries A.D.: Vijayanagara Empire: Polity, Administration, Society & Economy – Sri Krishna Devaraya and his contribution to Andhra Culture – Development of Literature & Architecture – Decline and Downfall.

Unit - III

Andhra through 16th& 17th Centuries A.D.: Evolution of Composite Culture – The QutbShahis of Golkonda – Origin & Decline – Administration, Society & Economy – Literature & Architecture.

Unit – IV

The 18th& 19th Centuries in Andhra: East India Company's Authority over Andhra – Three Carnatic Wars – Occupation of Northern Circars and Ceded Districts –Early Uprisings – Peasants and Tribal Revolts.

Unit – V

The 18th& 19th Centuries in Andhra: Impact of Company Rule on Andhra – Administration – Land Revenue Settlements – Society – Education - Religion – Impact of Industrial Revolution on Economy – Peasantry & Famines – Contribution of Sir Thomas Munroe, C. P. Brown & Sir Arthur Cotton – Impact of 1857 Revolt in Andhra.

References:

- 1 BalenduSekharam, TheAndhras Through the Ages
- 2 K. Sathyanarayana, A Study of the History and Culture of Andhras
- 3 Mallampalli Soma SekharaSarma, History of the ReddiKindogms
- 4 K.A.N.Sastry, A History of South India
- 5 H.K.Sherwani, History of the KutubShahi Dynasty
- 6 P.R.Rao, History of Modern Andhra
- 7 KhandavalliLakxmiranjanam&BalenduSekharam
- 8 SuravaramPratap Reddy
- 9 B.S.L.HanumantaRao
- 10 I.K.Sarma, *Early Historic Andhra Pradesh, 500 B.C.-624 A.D.*, New Delhi, 2008
- 11 B. Rajendra Prasad, *Early Medieval Andhra Pradesh, A.D.624 -1000 A.D.*, New Delhi, 2009
- 12 C. SomasundaraRao, *Medieval Andhra Pradesh, A.D. 1000 -1324 A.D.*, New Delhi, 2011
- 13 R. Soma Reddy, *Late Medieval Andhra Pradesh, A.D. 1324-1724 A.D.*, New Delhi, 2014

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III BA. Semester – V (CBCS) Paper – VI

Subject:: History

Title of the Paper – History & Culture of Andhra Desa (from 12th to 19th Century A.D)

Paper Code; HIS-502C

(w .e. f 2020 - 2021)

Pass Marks: 28

Time : 3Hrs

Max. Marks: 70

Model Question Paper

SECTION – A

Answer any TWO of the following

2x5=10

1. Rudrama Devi
2. Battle of Tallikota
3. Abdul Hasan Tanisha
4. Sir Arthur Cotton

SECTION – B

Answer any FOUR of the following

4x15=60

5. Write an essay on Socio-Economic and Cultural conditions of Kakatiyas
6. Discuss the glory of Vijayanagara Empire
7. Briefly explain the Administrative system of Qutub Shahis
8. Write about the general conditions of Andhra in 17th Century
9. Give a brief account of Carnatic Wars in Deccan
10. Explain about the Acquisition of Northern Circars by British
11. Describe the greatness of Thomas Munroe
12. Estimate the impact of 1857 Revolt in Andhra.

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SUBJECT- History	HIS 502C	III B.A
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TITLE: History & Culture of Andhra Desa (from 12th to 19th Century A.D)

Semester – V

Guidelines to the Paper Setter

Section	Unit – I	Unit – II	Unit – III	Unit - IV	Unit-V
A 5 Marks Questions	1	1	1	-	1
B 15 Marks Questions	1	1	2	2	2
Weightage	20	20	35	30	35

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Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF MATHEMATICS

MINUTES OF BOARD OF STUDIES

ODD SEMESTER

15-07-2020

Minutes of the meeting of BOS in Mathematics for B.Sc Degree

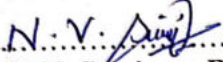
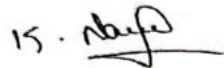

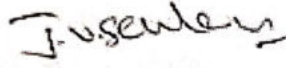



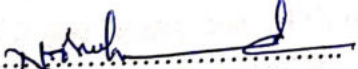
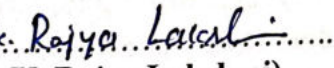
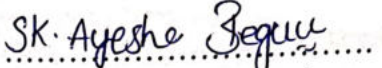
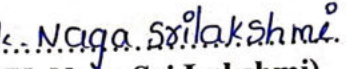
Courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru,

held at 12.00 Noon on 15 - 07 - 2020.

N.V. Srinivasa Rao

Presiding

Members Present:

- 1) 
(N.V. Srinivasa Rao) Chairman Head, Department of Mathematics, AG & SG S Degree College.
- 2) 
(Dr. K. Naveen Kumar) University Nominee Department of Mathematics, K.B.N Degree College, Vijayawada.
- 3) 
(Dr B. Jagan Mohan Rao) Subject Expert Prof and HOD of Mathematics, Sir C.R.R College, Eluru.
- 4) 
(Dr J. Vijayasekhar) Subject Expert Associate. Professor, Department of Mathematics, School of Science, GITAM University, Hyderabad.
- 5) 
(Dr P. Srinivasa Rao) Subject Expert Alumni member Director and Principal, Sri Srinivasa Educational Institutions, Vuyyuru.
- 6) 
(D. Sunitha) Member Lecturer in Mathematics AG & SG S Degree College.
- 7) 
(A. Bhargavi) Member Lecturer in Mathematics AG & SG S Degree College.
- 8) 
(Noor Mohammad) Member Lecturer in Mathematics AG & SG S Degree College.
- 9) 
(K. Rajya Lakshmi) Member Lecturer in Mathematics AG & SG S Degree College.
- 10) 
(Sk. Ayesha Begum) Student Member III B.Sc M.C.Cs AG & SG S Degree College.
- 11) 
(K. Naga Sri Lakshmi) Student Member III B.Sc M.P.C (T) AG & SG S Degree College.

Agenda of B.O.S Meeting:

1. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Mathematics for 1st Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
2. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Mathematics for 3rd Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
3. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Mathematics for 5th Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2020-21.
4. To note any changes in the syllabus are made by APSCHE for the academic year 2020-21.
5. Any other matter.

Resolutions.

1. Discussed and recommended that no changes are required in syllabi, Model Question Papers and Guidelines for question paper setters in Mathematics for the 1st Semester for the Academic year 2020-21.
2. Discussed and recommended that no changes are required in syllabi, Model Question Papers and Guidelines for question paper setters in Mathematics for the 3rd Semester for the Academic year 2020-21.
3. Discussed and recommended that changes are required in Syllabi. Model Question Papers and Guidelines to be followed by the question paper setters in Mathematics for 5th Semesters from the Academic year 2020-21. The maximum marks for IA is 30 and SE is 70. Each IA written examination is of 1 Hr. 30 min duration for 20 marks. The tests will be conducted centrally. The average of two such IA is calculated for 20 marks. 5 marks will be allotted basing on Assignment and 5 marks are allotted for attendance. There is no minimum passing for IA and there is no provision for improvement in IA. Even though the candidate is absent for two IA exams/obtain zero marks the external marks are considered (if he/ she gets 40 out of 70) and the result shall be declared as 'PASS' from the Academic year 2020-21.
4. Discussed and recommended to incorporate the 70% of the new syllabus if introduced / made by APSCHE for the academic year 2020-21. The same syllabus shall be incorporated as per the guidelines.
5. Discussed and recommended for organizing seminars, Guest lecturers, Online Examinations and Workshops to upgrade the knowledge of students for Competitive Examinations for the approval of the Academic Council.

N. V. Divya
Chairman

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MATHEMATICS	MAT-101	I B.Sc	w.e.f 2020-2021
SEMESTER-I		PAPER-I	Max.Marks:70
Hours/ Week: 6	<u>DIFFERENTIAL EQUATIONS</u>	No. of Credits: 5	

UNIT – I (12 Hours), Differential Equations of first order and first degree:

Linear Differential Equations; Differential Equations Reducible to Linear Form; Exact Differential Equations; Integrating Factors; Change of Variables.

UNIT – II (12 Hours): Orthogonal Trajectories, Differential Equations of first order but not of the first degree.

Equations solvable for p, Equations solvable for y, Equations solvable for x, Equations that do not contain x (or y), **Equations homogeneous in x and y**, Equations of the first degree in x and y – Clairaut’s Equation.

UNIT – III (14 Hours), Higher order linear differential equations-I :

Solution of homogeneous linear differential equations of order n with constant coefficients; Solution of the non-homogeneous linear differential equations with constant coefficients by means of polynomial operators.

General Solution of $f(D)y=0$

General Solution of $f(D)y=Q$ when Q is a function of x.

$1/f(D)$ is Expressed as partial fractions.

P.I. of $f(D)y = Q$ when $Q = be^{ax}$

P.I. of $f(D)y = Q$ when Q is $b \sin ax$ or $b \cos ax$.

UNIT – IV (12 Hours), Higher order linear differential equations-II :

Solution of the non-homogeneous linear differential equations with constant coefficients.

P.I. of $f(D)y = Q$ when $Q = bx^k$

P.I. of $f(D)y = Q$ when $Q = e^{ax}V$

P.I. of $f(D)y = Q$ when $Q = xV$

P.I. of $f(D)y = Q$ when $Q = x^mV$

UNIT –V (10 Hours), Higher order linear differential equations-III :

Method of variation of parameters; Linear differential Equations with non-constant coefficients; The Cauchy-Euler Equation, **Legendre’s linear equations, Miscellaneous differential equations.**

Reference Books :

1. Differential Equations and Their Applications by Zafar Ahsan, published by Prentice-Hall of India Learning Pvt. Ltd. New Delhi-Second edition.
2. A text book of mathematics for BA/BSc Vol 1 by N. Krishna Murthy & others, published by S. Chand & Company, New Delhi.
3. Ordinary and Partial Differential Equations Raisinghania, published by S. Chand & Company, New Delhi.
4. Differential Equations with applications and programs – S. BalachandraRao& HR Anuradha universities press.

Co – Curricular Activities(15 Hours) :

Seminar/ Quiz/ Assignments/ Project on Application of Differential Equations in Real life Problem/ Problem solving.

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DEPARTMENT OF MATHEMATICS

Question Paper Guidelines for SEMESTER-END Examinations

Time: 3 Hrs MAT-101

Max.Marks:70

Min. Marks: 28

Note :- 1). Answer any FOUR questions out of 8 in Section-A. Each question carries 5 marks
(4x5=20 Marks)

2). Answer any FIVE questions out of 8 in Section-B. Each question carries 10 marks.
(5x10=50 Marks)

Questions to be set as follows:

Blue Print for Question Paper pattern.

	Unit-1	Unit-2	Unit-3	Unit-4	Unit-5
<u>Section-A</u> (Short answer questions)	2	2	2	1	1
<u>Section-B</u> (Essay questions)	1	1	2	2	2

---The End---

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MATHEMATICS

MAT-101

I B.Sc

w.e.f 2020-2021

SECTION – A (Short Answer Questions)

Answer any **FOUR** of the following questions

4X5=20M

1. Solve $(1+xy)xdy + (1-xy)ydx = 0$
2. Solve $x \frac{dy}{dx} + y = y^2 \log x$
3. Solve $y + px = p^2 x^4$
4. Solve $x^2(y - px) = p^2 y$
5. Solve $(D^2 - 5D + 6)y = e^{4x}$
6. Solve $(D^2 + 4)y = \cos 2x$
7. Solve $(D^2 - 5D + 6)y = xe^{4x}$
8. Solve $[(1+x)^2 D^2 + (1+x)D + 1]y = 4C \cos \log(1+x)$ by Legendre's equation

SECTION - B

Answer any **FIVE** questions.

5x10 = 50M

9. Solve $x^2 y dx - (x^3 + y^3) dy = 0$
10. Show that the family of confocal conics $\frac{x^2}{a^2 + \lambda} + \frac{y^2}{b^2 + \lambda} = 1$ is self orthogonal
11. Solve $(D^2 - 4D + 3)y = \sin 3x \cos 2x$
12. Solve $(D^2 - 3D + 2)y = \cosh x$
13. Solve $(D^2 - 2D + 4)y = 8(x^2 + e^{2x} + \sin 2x)$
14. Solve $\frac{d^2 y}{dx^2} - 6 \frac{dy}{dx} + 13y = 8e^{3x} \sin 2x$
15. Solve $x^2 \frac{d^2 y}{dx^2} + 3x \frac{dy}{dx} + y = \frac{1}{(1-x)^2}$
16. Solve $(D^2 + a^2)y = \tan ax$ by the method of Variation of Parameters

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MATHEMATICS MAT-301 B.Sc.(E.M,T.M& CS)w.e.f: 2019-2020

SEMESTER-III PAPER-III Max.Marks:100

Hours per week: 6 Abstract Algebra and Real Analysis-I No.of Credits:5

UNIT – 1 : (10Hrs) GROUPS : -

Binary Operation – Algebraic structure – semi group-monoid – Group definition and elementary properties Finite and Infinite groups – examples – order of a group. Composition tables with examples.

UNIT – 2 : (10Hrs) SUBGROUPS : -

Complex Definition – Multiplication of two complexes Inverse of a complex-Subgroup definition– examples-criterion for a complex to be subgroups.Criterion for the product of two subgroups to be a subgroup-union and Intersection of subgroups.

Co-sets and Lagrange’s Theorem: -Cosets Definition – properties of Cosets–Index of a subgroups of a finite groups–Lagrange’s Theorem.

UNIT –3 : (12Hrs) NORMAL SUBGROUPS : -

Definition of normal subgroup – proper and improper normal subgroup–Hamilton group – criterion for a subgroup to be a normal subgroup – intersection of two normal subgroups – Subgroup of index 2 is a normal sub group – simple group – quotient group – criteria for the existence of a quotient group.

UNIT – 4 (14hrs) : REAL NUMBERS :

The algebraic and order properties of \mathbb{R} , Absolute value and Real line, Completeness property of \mathbb{R} , Applications of supreme property; intervals. **No. Question is to be set from this portion.**

Real Sequences: Sequences and their limits, Range and Boundedness of Sequences, Limit of a sequence and Convergent sequence. The Cauchy’s criterion, properly divergent sequences, Monotone sequences, Necessary and Sufficient condition for Convergence of Monotone Sequence, Limit Point of Sequence, Subsequences and the Bolzano-weierstrass theorem – Cauchy Sequences – Cauchy’s general principle of convergence theorem.

UNIT –5 (14hrs) : INFINITIE SERIES :

Series: Introduction to series, convergence of series. Cauchy’s general principle of convergence for series tests for convergence of series, Series of Non-Negative Terms.

1. P-test, 2. Cauchy’s n^{th} root test or Root Test. 3. D’-Alembert’s Test or Ratio Test.
4. Alternating Series – Leibnitz Test. Absolute convergence and conditional convergence.

Reference Books:

1. Abstract Algebra, by J.B. Fraleigh, Published by Narosa Publishing house.
2. Real Analysis by Rabert&Bartely and .D.R. Sherbart, Published by John Wiley.
3. A text book of Mathematics for B.A. / B.Sc. by B.V.S.S. SARMA and others, Published by S.Chand & Company, New Delhi.
4. Modern Algebra by M.L. Khanna.

Suggested Activities:

Seminar/ Quiz/ Assignments/Group discussions.

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EXAMINATION AT THE END OF THE THIRD SEMESTER (w.e.f 2019-20)

Mathematics Paper III MAT- 301 Max. Marks: 70 Pass Mark: 28 Time: 3 hrs.

Abstract Algebra and Real Analysis

Section – A (short answer questions)

Answer any **Four** of the following questions.

4x5 = 20M

Choosing at least ONE question from each Part.

Part - I

1. Show that in a group G for $a, b \in G$, $(a b)^2 = a^2 b^2 \Leftrightarrow G$ is abelian.
2. If H, K is two sub groups of a group G , then show that $H \cap K$ is also a sub group of G .
3. State and prove Lagrange's Theorem.
4. A subgroup H of a group G is normal subgroup iff $xHx^{-1} = H$, for all $x \in G$.

Part - II

5. Every convergent sequence is bounded? Is the converse true?
6. Show that the sequence $S_n = \frac{1}{n+1} + \frac{1}{n+2} + \frac{1}{n+3} + \dots + \frac{1}{n+n}$ is convergent.
7. Test for convergence of $\sum \sqrt{n+1} - \sqrt{n}$
8. Examine the conditionally convergence of $\sum (-1)^{n+1} \frac{n}{n^2+1}$

Section – B (long answer questions)

Answer any **FIVE** of the following questions.

5x10 = 50M

Choosing at least TWO questions from each Part.

Part - I

9. Show that the set of Q^+ of all +ve rational numbers forms an abelian group under the composition defined by 'o' such that $aob = \frac{ab}{3}$ for $a, b \in Q^+$.
10. If H is a non-empty complex of a group G . The necessary and sufficient condition for H to be a sub group of G is $a, b \in H \implies ab^{-1} \in H$ here b^{-1} is the inverse of b .
11. If H_1, H_2 are two subgroups of a group G , then $H_1 \cup H_2$ is a sub group of G if and only if $H_1 \subseteq H_2$ (or) $H_2 \subseteq H_1$.
12. A subgroup H of a group G is normal subgroup of G iff the product of two right (left) cosets of H in G is again a right (left) coset of H in G .

Part - II

13. A sequences is convergent if and only if it is a Cauchy's sequence
14. State and prove Cauchy's First theorem on sequence.
15. Test for convergence of $\sum \frac{1.3.5.....(2n-1)}{2.4.6.....2n} x^{n-1}$ ($x > 0$)
16. State and prove Leibnitz's test.

**A.G & S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE
(AUTONOMOUS), VUYYURU-521165**

(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)

DEPARTMENT OF MATHEMATICS

Question Paper Guidelines for SEMESTER-END Examinations

Time: 3 Hrs.

MAT-301

Max.Marks:70

Min. Marks: 28

Note :- 1). Answer any **FOUR** questions out of 8 in Section-A. Each question Carries 5 marks.
(4x5=20 Marks)

2). Answer any **FIVE** questions out of 8 in Section-B. Each question Carries 10 marks.
(5x10=50 Marks)

Questions to be set as follows:

	Unit-1	Unit-2	Unit-3	Unit-4	Unit-5
<u>Section-A</u> (Short answer questions)	1	2	1	2	2
<u>Section-B</u> (Essay questions)	1	2	1	2	2

---The End---

A.G &S.G SIDDHARTHA DEGREE COLLEGE, VUYYURU-521165

(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)

MATHEMATICS	MAT-501	III B.Sc	w.e.f 2019-20
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SEMESTER-V	PAPER-V	Max.Marks:70
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Hours/ Week: 5

No. of Credits: 5

VECTOR CALCULUS &RING THEORY

UNIT – 1: VECTOR DIFFERENTIATION: - (12 hrs)

Vector Differentiation, Ordinary derivatives of vectors, Differentiability, Gradient, divergence, Curl operators, Formulae Involving these operators.

UNIT – 2: VECTOR INTEGRATION: - (10 hrs)

Line Integral, Surface Integral and Volume integral with examples.

UNIT – 3: VECTOR INTEGRATION APPLICATIONS: - (12 hrs)

Theorems of Gauss and Stokes, Green's theorem in plane and applications of these theorems.

UNIT – 4: RINGS-I: - (14 hrs)

Definition of Ring and basic properties, Boolean Rings, divisors of zero and cancellation laws Rings, Integral Domains, Division Ring and Fields, The characteristic of a ring – The characteristic of an Integral Domain, The characteristic of a Field. Sub Rings, Ideals

UNIT – 5: RINGS-II: - (12 hrs)

Definition of Homomorphism – Homomorphic Image – Elementary Properties of Homomorphism – Kernel of a Homomorphism – Fundamental theorem of Homomorphism

Maximal Ideals – Prime Ideals.

Reference Books:-

1. Abstract Algebra by J. Fraleigh, Published by Narosa Publishing house.
2. Vector Calculus by SanthiNarayana, Published by S. Chand & Company Pvt. Ltd., New Delhi.
3. A text Book of B.Sc., Mathematics by B.V.S.S.Sarma and others, published by S. Chand & Company Pvt. Ltd., New Delhi.
4. Vector Calculus by R. Gupta, Published by Laxmi Publications.
5. Vector Calculus by P.C. Matthews, Published by Springer Verlagpublicattions.
6. Rings and Linear Algebra by Pundir&Pundir, Published by PragathiPrakashan.

Suggested Activities:

Seminar/ Quiz/ Assignments/ Project on Ring theory and its applications

A.G & S.G SIDDHARTHA DEGREE COLLEGE: VUYYURU

(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)

DEPARTMENT OF MATHEMATICS

Question Paper Guidelines for SEMESTER-END Examinations

Time: 3 Hrs MAT- 501 Max.Marks:70Min. Mark: 28

Note :-1) Answer any FOUR questions out of 8 in Section-A. Each question Carries 5 marks. (4x5=20 Marks)

2) Answer any FIVE questions out of 8 in Section-B. Each question Carries 10 marks. (5x10=50 Marks)

Questions to be set as follows:

Blue Print for Question Paper pattern.

	Unit-1	Unit-2	Unit-3	Unit-4	Unit-5
<u>Section-A</u> (Short Answer Questions)	2	2	1	2	1
<u>Section-B</u> (Essay Questions)	2	1	2	2	1

-The End -

**A.G & S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,
VUYYURU – 521165, KRISHNA Dt., A.P.
(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)
EXAMINATION AT THE END OF FIFTH SEMESTER (w.e.f 2019-20)**

MATHEMATICS Paper V MAT- 501 MAX.MARKS: 70 TIME: 3 hrs

(VECTOR CALCULUS AND RING THEORY)

Section – A (short answer questions)

Answer any **Four** of the following questions.

4x5 = 20M

Choosing at least **ONE** question from each Part.

Part - I

- 1) If $r = a \cos t i + a \sin t j + at \tan \theta k$ find $\left| \frac{dr}{dt} \times \frac{d^2r}{dt^2} \right|$ and $\left[\frac{dr}{dt} \frac{d^2r}{dt^2} \frac{d^3r}{dt^3} \right]$
- 2) Find $\text{div } f$ and $\text{curl } f$ where $f = \text{grad}(x^3 + y^3 + z^3 - 3xyz)$.
- 3) If $F = 3xyi - y^2j$ evaluate $\oint_c F \cdot dr$ where 'c' is the curve $y = 2x^2$ in the xy plane from (0, 0) to (1, 2).
- 4) If $F = 2xzi - xj + y^2k$ evaluate the $\int_v F \cdot dv$ where v is the region bounded by the surface $x = 0, x = 2, y = 0, y = 6, z = x^2, z = 4$.

Part - II

- 5) State and prove Green's theorem in a plane.
- 6) Prove that $Z_m = \{0, 1, 2, 3, \dots, m-1\}$ is a ring with respect to addition and multiplication modulo 'm'
- 7) Prove that a field has no Zero divisors.
- 8) If f is homomorphism of a ring R into a ring R^1 then $\text{ker } f$ is an ideal of R

Section – B (long answer questions)

Answer any **FIVE** of the following questions.

5x10 = 50M

Choosing at least **TWO** questions from each Part.

Part - I

- 9) Prove that $\text{grad}(A \cdot B) = (B \cdot \nabla)A + (A \cdot \nabla)B + B \times \text{curl } A + A \times \text{curl } B$.

- 10) Evaluate $\int_s F \cdot N ds$ where $F = zi + xj - 3y^2zk$ and s is the surface $x^2 + y^2 = 16$ included in the first octant between $z=0$ and $z=5$.
- 11) State and prove Gauss divergence Theorem.
- 12) Verify Green's Theorem in the plane for $\oint_c (3x^2 - 8y^2)dx + (4y - 6xy)dy$ where c is the region bounded by $y = \sqrt{x}$ and $y = x^2$.

Part - II

- 13) Find the directional derivative of the function $f = x^2 - y^2 + 2z^2$ at the point $P(1, 2, 3)$ in the direction of the line PQ where $Q = (5, 0, 4)$.
- 14) Define Field. Prove that every field is an integral domain.
- 15) Prove that $\mathbb{Q}(\sqrt{2}) = \{a + b\sqrt{2} / a, b \in \mathbb{Q}\}$ is a ring with respect to ordinary addition and multiplication.
- 16) State and prove fundamental theorem of ring homomorphism.

A.G & S.G SIDDHARTHA DEGREE COLLEGE: VUYYURU-521165

(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)

MATHEMATICS	MAT-502	III B.Sc	w.e.f 2019-20
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SEMESTER-V	PAPER-VI	Max.Marks:70
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Hours/ Week: 5	<u>LINEAR ALGEBRA</u>	No. of Credits: 5
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UNIT –I Matrix: (12 hrs)

Matrices, Elementary Properties of Matrices, Triangular form, Echelon form, Normal form Inverse Matrices, Non – Singular form, Rank of Matrix, Linear Equations, Characteristic Roots, Characteristic Vectors of square Matrix, Cayley – Hamilton Theorem.

UNIT – II Vector Spaces-I: (12 hrs)

Vector Spaces, General properties of vector spaces, n-dimensional Vectors, addition and scalar multiplication of Vectors, internal and external composition, Null space, Vector subspaces, Algebra of subspaces, Linear Sum of two subspaces, linear combination of Vectors, Linear span Linear independence and Linear dependence of Vectors.

UNIT –III Vector Spaces-II: (12 hrs)

Basis of Vector space, Finite dimensional Vector spaces, basis extension, co-ordinates, Dimension of a Vector space, Dimension of a subspace, Quotient space and Dimension of Quotient space.

UNIT –IV Linear Transformations: (12 hrs)

Linear transformations, linear operators, Properties of L.T, sum and product of LTs, Algebra of Linear Operators, Range and null space of linear transformation, Rank and Nullity of linear transformations – Rank – Nullity Theorem.

UNIT –V Inner product space: (12 hrs)

Inner product spaces, Euclidean and unitary spaces, Norm or length of a Vector, Schwartz inequality, Triangle in Inequality, Parallelogram law, Orthogonality, Orthonormal set, complete orthonormal set, Gram – Schmidt orthogonalisation process. Bessel's inequality and Parseval's Identity.

Reference Books:

1. Linear Algebra by J.N. Sharma and A.R. Vasista, published by Krishna Prakashan Mandir, Meerut- 250002.
2. Matrices by Shanti Narayana, published by S.Chand Publications.
3. Linear Algebra by Kenneth Hoffman and Ray Kunze, published by Pearson Education (low priced edition), New Delhi.
4. Linear Algebra by Stephen H. Friedberg et al published by Prentice Hall of India Pvt. Ltd. 4th Edition 2007.

Suggested Activities:

Seminar/ Quiz/ Assignments/ Project on “Applications of Linear algebra Through Computer Sciences”

A.G & S.G SIDDHARTHA DEGREE COLLEGE: VUYYURU

(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)

DEPARTMENT OF MATHEMATICS

Question Paper Guidelines for SEMESTER-END Examinations

Time: 3 Hrs

MAT- 502

Max.Marks:70

Min. Mark: 28

Note :-1) Answer any FOUR questions out of 8 in Section-A. Each question Carries 5 marks. (4x5=20 Marks)

2) Answer any FIVE questions out of 8 in Section-B. Each question Carries 10 marks. (5x10=50 Marks)

Questions to be set as follows:

Blue Print for Question Paper pattern.

	Unit-1	Unit-2	Unit-3	Unit-4	Unit-5
<u>Section-A</u> (Short Answer Questions)	2	1	1	2	2
<u>Section-B</u> (Essay Questions)	2	1	1	2	2

-The End -

A.G & S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,
VUYYURU – 521165, KRISHNA Dt., A.P.
(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)

EXAMINATION AT THE END OF FIFTH SEMESTER (w.e.f 2019-20)

MATHEMATICS Paper VI MAT- 502 MAX.MARKS: 70 TIME: 3 hrs

LINEAR ALGEBRA

Section – A (short answer questions)

Answer any **Four** of the following questions.

4x5 = 20M

Choosing at least **ONE** question from each Part.

Part - I

- 1) Show that the rank of the transpose of a matrix is equal to the rank of the original matrix. i.e., $\rho(A) = \rho(A^T)$.

- 2) Find the rank of the matrix $\begin{bmatrix} 1 & -2 & 2 & -3 \\ 4 & 1 & 0 & 2 \\ 0 & 3 & 0 & 4 \\ 0 & 1 & 0 & 2 \end{bmatrix}$ by reducing it in the Normal form

- 3) If S is a subset of a vector space V(F), then prove that S is a subspace of V $\Leftrightarrow L(S) = S$

- 4) Let w₁ and w₂ be two subspaces of R^4 given by $w_1 = \{(a,b,c,d) ; b-2c+d=0\}$,

$w_2 = \{(a,b,c,d) ; a=d, b=2c\}$. Find the basis and dimension (i)w₁ (ii)w₂ (iii) $w_1 \cap w_2$

and hence find the $dim(w_1 + w_2)$

Part - II

- 5) Let $T:R^2 \rightarrow R^2$ be a linear transformation defined by $T(1,0)=(1,1), T(0,1)=(-1,2)$ then

find a linear transformation T

- 6) The mapping $T: V_3(\mathbb{R}) \rightarrow V_2(\mathbb{R})$ is defined by $T(x, y, z) = (x - y, x - z)$ is a linear transformation.
- 7) State and prove Cauchy – Schwarz’s inequality
- 8) State and prove Triangle inequality

Section – B (long answer questions)

Answer any **FIVE** of the following questions. **5x10 = 50M**

Choosing at least TWO questions from each Part.

Part - I

- 9) State and prove Cayley – Hamilton theorem in Matrices.
- 10) Find the characteristic roots and the corresponding characteristic vectors of the matrix

$$A = \begin{bmatrix} 1 & 4 \\ 3 & 2 \end{bmatrix}$$

- 11) Let $V(F)$ be a vector space. A non-empty set $W \subseteq V$. The necessary and sufficient condition for W to be a subspace of V is $a, b \in F$ and $\alpha, \beta \in V \Rightarrow a\alpha + b\beta \in W$
- 12) Let W be a subspace of a finite dimensional vector space $V(F)$ then
- $$\dim V/W = \dim V - \dim W.$$

Part - II

- 13) Find the linear Transformation $T(x, y, z)$ where $T: \mathbb{R}^3 \rightarrow \mathbb{R}$ is defined by
- $$T(1, 1, 1) = 3, T(0, 1, -2) = 1 \text{ and } T(0, 0, 1) = -2.$$
- 14) State and prove Rank-nullity theorem
- 15) State and prove Bessel’s inequality
- 16) If $(1, 0, 1, 1), (-1, 0, -1, 1), (0, -1, 1, 1)$ forms a basis of a subspace of $\mathbb{R}^4(\mathbb{R})$ use Gram-Schmidt process to obtain an orthonormal basis.

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF PHYSICS

MINUTES OF BOARD OF STUDIES

ODD SEMESTER

08-07-2020

Minutes of the meeting of Board of studies in Physics for the Autonomous course of A.G. & S.G.Siddhartha Degree College of Arts & Science, Vuyyuru held at 10.30 A.M on 08-07-20 in the Department of Physics.

Sri Ch. Vijay Anil Dai Presiding

Members Present:

- 1) Ch. Vijay Anil Dai Chairman
(Ch. Vijay Anil Dai) Head, Department of Physics
A.G. & S.G.S. Degree College of Arts & Science, Vuyyuru - 521165.
- 2) Dr. M. Rama Krishna N University Nominee
(Dr. M. Rama Krishna N) Lecturer in Physics, HEAD, DEPT. OF PHYSICS
The Hindu College,
Machilipatnam.
- 3) Dr. P. Syam Prasad Academic Council Nominee
(Dr. P. Syam Prasad) Asst. Professor,
Dept. of Physics, NIT,
Warangal.
- 4) Dr. K. Suresh Academic Council Nominee
(Dr. K. Suresh) Lecturer in Physics,
VSR & NVR College for Arts & Sciences
Tenali.
- 5) I. Chittibabu Representative from Industry
(I. Chittibabu) Sub Divisional Engineer, BSNL,
Vijayawada.
- 6) J. Dilip Alumini
(J. Dilip) Lecturer in Physics,
Srinivasa College, Gannavaram.
- 5) P. Venkata Ramana Member
(P.V. Ramana) Lecturer in Physics,
A.G. & S.G.S. Degree College of Arts & Science, Vuyyuru - 521165.
- 6) U. Ramprasad Member
(U. Ramprasad) Lecturer in Physics,
A.G. & S.G.S. Degree College of Arts & Science, Vuyyuru - 521165.
- 7) J. Hareeshchandra Member
(J. Hareeshchandra) Lecturer in Physics,
A.G. & S.G.S. Degree College of Arts & Science, Vuyyuru - 521165.

8) M. Sateesh Member
(M. Sateesh)

Lecturer in Physics,
A.G. & S.G.S.Degree College
of Arts &
Science, Vuyyuru - 521165.

9) M. Purna Durga Parimala Member
(M.P.D.Parimala)

Lecturer in Physics,
A.G. & S.G.S.Degree College
of Arts &
Science, Vuyyuru - 521165.

Agenda for B.O.S Meeting

- 1 .To recommend the syllabi and model papers for I semester of I Degree B.Sc., Physics for the Academic year 2020-2021.
2. To recommend the syllabi and model papers for III semester of II Degree B.Sc., Physics for the Academic year 2020-2021.
3. To recommend the syllabi and model papers for V semester of III Degree B.Sc. Physics for the Academic year 2020-2021.
- 4.To recommend the Blue print of question papers for I, III & V semesters of B.Sc. Physics for the Academic year 2020-2021.
5. To recommend the Guidelines to be followed by the question paper setters in Physics for I, III & V Semester – end exams.
6. To recommend the teaching and evaluation methods to be followed under Autonomous status.
7. Any suggestions regarding seminars, workshops, Guest lecture to be organized.
8. Recommend the panel of paper setters and Examiners to the controller of Examinations of Autonomous Courses of A.G. & S.G.S. Degree colleges of Arts & Science, Vuyyuru.
9. Any other matter.


Chairman.

RESOLUTIONS

- 1) It is resolved to change the **syllabi and model papers for I semester of I B.Sc.** as prescribed by APSCHE for the Academic year 2020-21.
- 2) It is resolved to continue the same **syllabi and model papers for III semester of II B.Sc.** under Choice Based Credit System (CBCS) for the Academic year 2020-21.
- 3) It is resolved to continue the same **syllabi and model papers for V semester of III B.Sc.** under Choice Based Credit System (CBCS) for the Academic year 2020-21.
- 4) It is resolved to change the **Blue print** for I semester of Degree I B.Sc. as prescribed by APSCHE for the Academic year 2020-21.
- 5) It is resolved to continue the same **Blue print** for III & V semesters of Degree II, III B.Sc. for the Academic year 2020-21.
- 6) It is resolved to continue the same **Guidelines** for III & V semesters of Degree II, III B.Sc. for the Academic year 2020-21.
- 7) It is resolved to continue the following teaching and evolution methods for Academic year 2020-21.

Teaching Methods:

Besides the conventional methods of teaching, we use modern technology i.e. using of LCD projector, U boards, virtual lab etc, for better understanding of concepts.

Evaluation of a student is done by the following procedure:

➤ Internal Assessment Examinations:

- For I B.Sc.(sem I) , II B.Sc.(sem III) and III B.Sc. (i.e. V semester) out of 100 marks in each paper, 30 marks shall be allocated for internal assessment
- Out of these 30 marks, **20 marks are allocated for announced tests (i.e. IA-1 & IA-2)**. Two announced tests will be conducted and average of these two tests shall be deemed as the marks obtained by the student, **5 marks** are allocated on the basis of candidate's **percentage of attendance**, **5 marks** are allocated for **assignment / class room seminars for I, III and V Semesters**.

➤ Semester – End Examination:

- The maximum marks for I B.Sc , II B.Sc and III B.Sc. Semester – End examination shall be 70 marks and duration of the examination shall be 3 hours.
 - **Semester – End examinations** in theory papers and **practical Examinations** shall be conducted at the end of every semester **I, III & V for I, II & III B.Sc.**
- 8) Discussed and recommended for organizing seminars, **Guest lecturers, workshops** to upgrade the knowledge of students, for the approval of the academic council.
 - 9) Discussed and empowered the Head of the department of Physics to suggest the panel of paper setters and examiners to the controller of examinations.

10) *Discussed and recommended to incorporate the percentage of the new syllabus, if introduced /reduced/ made by APSCHE/UGC/ Krishna University for the academic year 2020-21. The same syllabus shall be incorporated as per the guidelines of the competent authority.*

C. S. S. S. S.
Chairman.

DEPARTMENT OF PHYSICS

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE

(AUTONOMOUS), VUYYURU – 521 165

I B.Sc. 1st Semester (2020-2021)

Physics Paper I: **Mechanics Waves and Oscillations**

Work load: 60hrs per semester PHY101C | 4 hrs/week

UNIT-I:

1. Mechanics of Particles (5 hrs)

Review of Newton's Laws of Motion, Motion of variable mass system, Motion of a rocket, Multistage rocket, Concept of impact parameter, scattering cross-section, Rutherford scattering-concept only.

2. Mechanics of Rigid bodies (7 hrs)

Rigid body, rotational kinematic relations, Equation of motion for a rotating body, Angular momentum and Moment of inertia tensor, Euler equations, Precession of a spinning top, Gyroscope, Precession of atom and nucleus in magnetic field, Precession of the equinoxes

Unit-II:

3. Motion in a Central Force Field (12hrs)

Central forces, definition and examples, characteristics of central forces, conservative nature of central forces, Equation of motion under a central force, Kepler's laws of planetary motion- Proofs, Kepler's third law from inverse-square law of Gravitation. Motion of satellites, Basic idea of Global Positioning System (GPS).

UNIT-III:

4. Relativistic Mechanics (12hrs)

Introduction to relativity, Frames of reference, Galilean transformations, absolute frames, Michelson-Morley experiment, Postulates of Special theory of relativity, Lorentz transformation, time dilation, length contraction, variation of mass with velocity, Einstein's mass-energy relation

Unit-IV:

5. Undamped, Damped and Forced oscillations: (07 hrs)

Simple harmonic oscillator and solution of the differential equation, Damped harmonic oscillator, Forced harmonic oscillator – Their differential equations and solutions, Resonance, Logarithmic decrement, Relaxation time and Quality factor.

6. Coupled oscillations: (05 hrs)

Coupled oscillators-Introduction, Two coupled oscillators, N-coupled oscillators and wave equation.

Unit-V:

7. Vibrating Strings: (07 hrs)

Transverse wave propagation along a stretched string, General solution of wave equation and its significance, Modes of vibration of stretched string clamped at ends, Overtones and Harmonics, Melde's strings.

8. Ultrasonics: (05 hrs)

Ultrasonics, General Properties of ultrasonic waves, Production of ultrasonics by piezoelectric and magnetostriction methods, Detection of ultrasonics, Applications of ultrasonic waves, Ultrasonic interferometer.

REFERENCE BOOKS:

- ❖ B. Sc. Physics, Vol.1, Telugu Academy, Hyderabad
- ❖ Fundamentals of Physics Vol. I - Resnick, Halliday, Krane, Wiley India 2007
- ❖ College Physics-I. T. Bhimasankaram and G. Prasad. Himalaya Publishing House.
- ❖ University Physics-FW Sears, MW Zemansky & HD Young, Narosa Publications, Delhi
- ❖ Mechanics, S.G.Venkatachalapathy, Margham Publication, 2003.
- ❖ Waves and Oscillations. N. Subramanyam and Brijlal, Vikas Publications.
- ❖ Unified Physics - Waves and Oscillations, Jai Prakash Nath & Co. Ltd.
- ❖ Waves & Oscillations. S.Badami, V. Balasubramanian and K.R. Reddy, Orient Longman.
- ❖ The Physics of Waves and Oscillations, N.K.Bajaj, Tata McGraw Hill
- ❖ Science and Technology of Ultrasonics- Baldevraj, Narosa, New Delhi, 2004

The Guidelines to be followed by the question paper setters in Physics for the First semester - end exams (2020-2021)

PAPER TITLE: Mechanics, waves & Oscillations

Paper- I Semester – I Maximum marks: 70 Duration: 3Hours

Weightage for the question paper

Syllabus	Section-A (Short answer questions)	Section-B (Essay questions)
Unit-1 (30 Marks)	T+P	2
Unit-2 (20 Marks)	T+P	1
Unit-3 (25 Marks)	T	2
Unit-4 (25 Marks)	T	2
Unit-5 (20 Marks)	T+P	1

Note: T means one theory question, P means one problem

➤ **Section-A** contains 5 short questions and 3 problems out of these

8 questions, the student has to answer any 4, each question carries 5 marks.

- **Section –B** contains 8 essay questions, the student has to answer any 5 questions, each question carries 10 marks
- The Question papers setters are requested to cover all the topics in the syllabus as per the weightage given by us.

MODEL PAPER

PAPER TITLE : **Mechanics,waves & Oscillations**

Duration : 3Hours

Maximum marks : 70 marks

Pass marks : 28 marks

Section – A

Answer any Four of the following questions

4x5=20m

1. Write a note on impact parameter.
- 2 .A car develop 75KW power when rotating at a speed of 100 rpm what is the torque acting?
3. What is Central Force? Give to Two examples.
- 4 . Explain length contraction.
5. If the earth be one – half of its present distance From the sun, What will be the number of days in a year.
- 6.Explian logarithmic decrement & Quality factor.
7. Explain fundamental frequency, overtone and harmonics.
8. Calculate the fundamental frequency of a quartz crystal of thickness 0.001m. Given $y=7.9 \times 10^{10} \text{ n/m}^2$ $p=2650 \text{ kg/m}^3$

Section – B

Answer any FIVE of the following questions

5X10=50M

9. Derive an expression for the velocity of a variable mass System.
- 10.Derive the Eluer equations of rotational motion for a rigidi body fixed at one end.
11. State kepler's laws of planetary motion. Derive kepler's first laws of planetary motion.
12. State the postulates of special theory of relativity. Derive the Lorentz transformation equation
13. Describe the Michelson – Morley Experiment with relevant theory and discuss the importance of its result.
14. What is the simple harmonic oscillator? Derive equation of motion of the simple harmonic oscillator and its solution.
15. What is forced oscillation? Derive the differential equation of forced oscillation. Obtain its solution .

16. Explain the production of ultrasonic by magnetostriction method.

Practical paper 1: Mechanics Waves and Oscillations

Exam duration : 3Hours Maximum marks : 50 marks

Minimum of 6 experiments to be done and recorded

1. Young's modulus material a rod by uniform bending
2. Young's modulus material a rod by non- uniform bending
3. Surface tension of a liquid by capillary rise method
4. Fly-wheel- Determination of moment of inertia.
5. Determination of 'g' by compound/bar pendulum
6. Determination of the elastic constants of the material of a flat spiral spring.
7. Determination of the frequency of a bar- Melde's experiment.
8. Study of a damped oscillation using the torsional pendulum immersed in liquid-decay constant and damping correction of the amplitude.

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

(AUTONOMOUS), VUYYURU – 521 165

II B.Sc. 3rd Semester (2020-2021)

III SEMESTER

Paper III: Wave Optics

Work load: 60 hrs per semester 4 hrs/week

UNIT-I .. (7 hrs) 1. Aberrations:

Introduction – monochromatic aberrations, spherical aberration, methods of minimizing spherical aberration, coma, astigmatism and curvature of field, distortion. Chromatic aberration-the achromatic doublet. Achromatism for two lenses (i)in contact and (ii) separated by a distance.

UNIT –II .. (9 hrs) 2. Interference : Division of wavefront:

Principle of superposition-coherence-conditions for interference of light..Fresnel's biprism-determination of wavelength of light. Determination of thickness of a transparent material using biprism –Determination of the thickness of a thin sheet of transparent material. Change of phase on reflection – Stoke's Law.

UNIT –III .. (10 hrs) 3. Division of Amplitude:

Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (cosine law) –colors of thin films-Non reflecting films-interference by a plane parallel film illuminated by a point source- Interference by a film with two non-parallel reflecting surfaces (Wedge shaped film). Determination of diameter of wire- Newton's rings in reflected light-Determination of wavelength of monochromatic light. Michelson interferometer-Determination of wavelength of monochromatic light.

UNIT- IV .. (12 hrs) 4. Diffraction:

Introduction,distinction between Fresnel and Fraunhofer diffraction, Fraunhofer diffraction –Diffraction due to single slit and circular aperture-Limit of resolution-Fraunhofer diffraction due to double slit-Fraunhofer diffraction pattern with N slits (diffraction grating).Resolving power of grating-Determination of wavelength of light in normal and oblique incidence methods using diffraction grating.Fresnel's half period zones-area of the half period zones-zone plate-comparison of zone plate with convex lens-difference between interference and diffraction.

UNIT- V 5.Polarisation (12 hrs) :

Polarized light: methods of polarization polarization by reflection, refraction, double refraction, scattering of light-Brewster's law-Mauls law-Nicol prism polarizer and analyzer-Quarter wave plate, Half wave plate-optical activity, analysis of light by Laurent's half shade polarimeter-Babinet's compensator.

6. Lasers and Holography: (10 hrs)

Lasers: introduction,spontaneous emission, stimulated emission. Population Inversion, Laser principle-Einstein coefficients-Types of lasers-He-Ne laser, Ruby laser-Applications of lasers. Holography: Basic principle of holography-Gabor hologram and its limitations, Applications of holography.

TEXT BOOKS:

1. BSc Physics, Vol.2, *Telugu Akademy, Hyderabad*
2. A Text Book of Optics-N Subramanyam, L Brijlal, *S.Chand & Co.*

3. Unified Physics Vol.II Optics & Thermodynamics – *Jai Prakash Nath&Co.Ltd., Meerut*
4. Second Year Physics, K. Ramakrishna,D.V.Brahmaji,A.Sreenivasa Rao & S.L.V. Mallikarjun, VikasPublications,Guntur.

REFERENCE BOOKS:

1. Optics,F..A. Jenkins and H.G. White, *Mc Graw-Hill*
2. Optics, AjoyGhatak,Tata Mc Graw-Hill.
3. Fundamentals of Physics. Halliday/Resnick/Walker.C. *Wiley India Edition 2007*
4. Introduction of Lasers – Avadhanulu, *S.Chand& Co.*
5. Fundamentals of Optics, H.R. Gulati and D.R. Khanna, 1991, R. Chand Publication
6. Principles of Optics- BK Mathur, *Gopala Printing Press, 1995*

The Guidelines to be followed by the question paper setters in Physics for the III Semester - end exams

PAPER TITLE: Wave Optics

Paper- III Semester – III Maximum marks: 70 marks

Duration: 3Hours

Weightage for the question paper

Syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1(20 Marks)	T+P	1
Unit-2(15 Marks)	T	1
Unit-3(30 Marks)	T+P	2
Unit-4(25 Marks)	T	2
Unit-5(30 Marks)	T+P	2

Note: T means one theory question, P means one problem

- **Section-A** contains **5** short questions and **3** problems out of these **8** questions, the student has to answer any **4**, each question carries **5** marks.
- **Section –B** contains **8** essay questions, the student has to answer any **5** questions, each question carries **10** marks.
- The Question papers setters are requested to cover all the topics in the syllabus as per the weightage given by us.

SEMESTER – III	COURSE CODE : PHY- 301C
PAPER TITLE : Wave Optics MODEL PAPER	

Duration : 3Hours Maximum marks : 70 marks Pass marks : 28 marks

II B.Sc (PHYSICS) - III SEMESTER - WAVE OPTICS

TIME: 3 HRS

PHY – 301 C

MAX MARKS: 70

SECTION – A

ANSWER ANY FOUR OF THE FOLLOWING

(4 X 5 = 20 M)

- 1) Explain coma in lenses with a neat diagram
- 2) Derive condition for change of phase of reflection by stokes law
- 3) Explain the formation of colours in thin films
- 4) Explain the difference between interference and diffraction
- 5) State and explain Malus law
- 6) Two thin convex lenses of focal length 0.25 m and 0.20 m are placed coaxially 10 cm apart. Find the focal length of combination.
- 7) In Newton's ring experiment, the diameter of the 10th dark ring is 0.433 cm. Find the wavelength of light, if the radius of curvature of the lens is 70 cm
- 8) A half wave plate is constructed for a wavelength of 6000 \AA , for what wave length does it work as a quarter wave plate.

SECTION – B

ANSWER ANY FIVE OF THE FOLLOWING

(5 X 10 = 50 M)

- 9) What is chromatic aberration . obtain an expression for the chromatic aberration of a lens .Derive the condition for achromatism when the lens are in contact and seperated by a distance .
- 10) Describe Fresel's biprism method to determine the wavelength of light by forming interference fringes.
- 11) Describe the experimental arrangement to observe Newton's rings by reflected light. Obtain an expressions for the diameter of nth bright and dark rings
- 12) Describe the principle, construction and working of Michelsons interferometer with a sketch .
- 13) What is diffraction. Describe Fraunhoffer's diffraction due to single slit .
- 14) Describe the construction and working of a zone plate with necessary theory
- 15) Describe the construction and working of Nicol prism. Explain how it is used as polarizer and analyser.
- 16) Write a note on spontaneous emission and stimulated emission. Explain the construction and working of ruby laser.

Practical Paper III: Wave Optics

Exam duration : 3Hours

Maximum marks : 50 marks

Work load:30 hrs

Minimum of 6 experiments to be done and recorded

1. Determination of radius of curvature of a given convex lens-Newton's rings.
2. Resolving power of grating.
3. Study of optical rotation –polarimeter.
4. Dispersive power of a prism.
5. Determination of wavelength of light using diffraction grating- minimum deviation method.
6. Wavelength of light using diffraction grating-normal incidence method.
7. Resolving power of a telescope.
8. Refractive index of a liquid-hallow prism
9. Determination of thickness of a thin fiber by wedge method
10. Spectrometer- i-d curve.
11. Determination of refractive index of liquid-Boy's method.
12. Determination of wavelength-Hartmann formula (prism)

DEPARTMENT OF PHYSICS
**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

(AUTONOMOUS), VUYYURU – 521 165

III B.Sc. 5th Semester (2020-2021)

Paper V: Electricity, Magnetism and Electronics

Work load:60 hrs per semester 4 hrs/week Course Code : PHY 501C

Unit – I(12hrs)

1.Electrostatics

Gauss's law Statement and its proof-Electric field intensity due to (1) Uniformly charged sphere and (2) an infinite conducting sheet of charge. Electric potential- Equipotential surface –potential due to i) a point charge ii) charged spherical shell .

2.Dielectrics

Electric dipole moment and molecular polarizability- Electric displacement D, electric polarization P – relation between D, E, and P- Dielectric constant, susceptibility .

Unit – II(12hrs)

3. Electric and magnetic field Biot – Savart's law and calculation of B due to long straight wire, a circular current loop and solenoid. Hall effect-determination of Hall coefficient and applications.

4.Electromagnetic

induction

Faraday's law – Lenz's law self and mutual inductance, coefficient of coupling, calculation of self inductance of a long solenoid, energy stored in magnetic field. Transformer- energy losses and efficiency.

Unit-III(12hrs)

5.Alternating current and electro magnetic waves

Alternating current –Relation between current and voltage in LR and CR circuits, vector diagrams, LCR series and parallel resonant circuit , Q- factor, power in AC circuits.

6.Maxwell's equations

Idea of displacement current- Maxwell's equations (integral and differential forms) (no derivation) Maxwell's wave equation(with derivation), Transverse nature of electromagnetic wave. Poynting Vector (statement and proof) production of electromagnetic wave Hertz experiment.

Unit-IV(12hrs)

7.Basic electronics:

PN junction diode Zener diode ,I-V characteristics, PNP and NPN Transistors, CB,CE and CC configuration Relation between α β and Γ transistors (CE) characteristics, Transistor as an amplifier.

Unit-V(12hrs)

Digital electronics:

Number systems-conversion of binary to decimal system and vice versa. Binary addition and subtraction (1's and 2's complement methods) laws of Boolean algebra-De Morgan's laws-statement and proof basic logic gates, NAND and NOR as universal gates Half adder and FULL adder.

REFERENCE BOOKS

- 1) BSC Physics vol.3 Telugu Academy, Hyderabad.
- 2) Electricity, Magnetism D,N Vasudeva. S.chand & co.,
- 3) Electricity, Magnetism and Electronics, K.K.Tewari, R.Chand &co.,
- 4) Principles of electronics, V.K.Mehta, S.Chand &co.,

- 5) Digital principles and applications A.P Malvino and D.P.Leach, Mc GrawHILL Edition.

The Guidelines to be followed by the question paper setters in Physics for the V Semester - end exams

PAPER TITLE: Electricity, Magnetism and Electronics

Paper- V Semester – V Maximum marks: 70 marks Duration: 3Hours

Weightage for the question paper

Syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (25 Marks)	T	2
Unit-2 (20 Marks)	T+P	1
Unit-3 (30Marks)	T+P	2
Unit-4 (20 Marks)	T+T	1
Unit-5 (25 Marks)	T	2

Note: **T** means one theory question, **P** means one problem

- **Section-A** contains **6** short questions and **2** problems out of these **8** questions, the student has to answer any **4**, each question carries **5** marks.
- **Section –B** contains **8** essay questions, the student has to answer any **5** questions, each question carries **10** marks.
- The Question papers setters are requested to cover all the topics in the syllabus as per the weightage given by us.

SEMESTER – V	COURSE CODE : PHY-501 C
PAPER TITLE : Electricity, Magnetism and Electronics	

Duration : 3Hours Maximum marks : 70 Pass marks : 28 marks

MODEL PAPER

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), VUYYURU – 521 165
III B.Sc. (PHYSICS)- V SEMESTER
ELECTRICITY, MAGNETISM AND ELECTRONICS**

TIME: 3 Hrs PHY – 501 C MAX MARKS: 70 PASS MARK : 28

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SECTION – A

ANSWER ANY FOUR OF THE FOLLOWING (4 X 5 = 25 M)

- 1) Write a short note on equi - potential surfaces
- 2) obtain an expression for energy stored in a magnetic field
- 3) Derive expression for power in ac circuit
- 4) Explain CE configuration of a transistor
- 5) Explain briefly how a transistor works as an amplifier
- 6) Explain about half adder circuit with truth table.
- 7) Calculate the intensity of the magnetic field at the center of a circular coil of radius 20 cm and 40 turns having a current of 2A in it.
- 8) In a series RLC circuit $R = 100 \text{ ohm}$, $L = 0.5\text{H}$ and $C = 0.4 \mu\text{F}$. calculate resonant frequency

SECTION – B

ANSWER ANY FIVE OF THE FOLLOWING QUESTIONS (5 X 10 = 50 M)

- 9) Derive an expression for the electric field due to uniformly charged sphere using Gauss law?
- 10) Define D, E and P derive the relation between them
- 11) Calculate the magnetic induction due to a long straight wire using Biot- savart's law
- 12) State and prove pointing theorem
- 13) Explain the growth and decay of charge in LR- circuit
- 14) Describe the construction and working of Zener diode.
- 15) State and prove De Morgan's theorem with examples.
- 16) Explain about basic logic gates with truth tables.

Practical paper V: Electricity, Magnetism and Electronics

Exam duration : 3Hours

Maximum marks : 50 marks

Work load:30hrs

Minimum of 6 experiments to be done and recorded

1. Figure of merit of a moving coil galvanometer.
2. LCR circuit series/parallel resonance, Q-factor
3. Determination of Ac-frequency-sonometer
4. Verification of Kirchoff's laws
5. Field along the axis of a circular coil carrying current.
6. PN Junction diode Characteristics
7. characteristics of Zener diode
8. Transistor CE Characteristics.
9. Logic Gates –OR ,AND, NOT,and NAND gates verification of truth tables.
10. Verification of De Morgan's theorems.

DEPARTMENT OF PHYSICS
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(AUTONOMOUS), VUYYURU – 521 165
III B.Sc. Physics – V Semester – Paper –VI (2020 – 2021)

Modern Physics

Course Code : PHY 502C Work Load : 60 hrs per semester 4
hrs/week

Unit – I (12 hrs) 1. Atomic and molecular physics

Introduction – Drawbacks of Bohr's atomic model – Sommerfeld's elliptical orbits-relativistic correction (no derivation). Vector atom model and Stern & Gerlach experiment - quantum numbers associated with it. L-S and j-j coupling schemes. Zeeman Effect and its experimental study.

Raman effect, stokes and Anti stokes lines . Quantum theory of Raman effect. Experimental arrangement – Applications of Raman effect.

UNIT – II (12 hrs) 2. Matter waves & Uncertainty Principle

Matter waves, de Broglie's hypothesis – wavelength of matter waves, Properties of matter waves – Davisson and Germer experiment, uses of electron diffraction-Phase velocity and Group velocity (definitions only)- relation between phase velocity and Group velocity–Heisenberg's uncertainty principle for position and momentum (x and p) & energy and time (E and t). Experiment verification.

UNIT – III (12 hrs) 3.Quantum (wave) mechanics

Basic postulates of quantum mechanics – Schrodinger time independent and time dependent wave equation – derivations. Physical interpretation of wave function. Applications of Schrodinger wave equation to particle in one dimensional infinite box. Harmonic oscillator.

UNIT – IV (12 hrs) 4.General properties of Nuclei

Basic ideas of nucleus – size, mass, charge density (matter energy), binding energy, angular momentum, parity, magnetic moment, electric quadrupole moments. Liquid drop model and shell model (qualitative aspects only)- Magic numbers.

5. Radioactivity decay

Alpha decay : basis of α – decay processes. Range of α -particles , Geiger's Law, Geiger- Nuttal law. β – decay, β ray continuous and discrete spectrum, neutrino hypothesis.

UNIT – V (12 hrs)

6. Crystal structure

Amorphous and crystalline materials, unit cell, Miller indices, reciprocal lattice, types of lattices, diffraction of X- rays by crystals, Bragg's law, experimental techniques, Laue's method and powder diffraction method.

7. Superconductivity:

Introduction – experimental facts, critical temperature – critical field – Meissner effect – isotope effect – Type I and Type II superconductors – BCS theory (elementary ideas only) – applications of superconductors.

REFERENCE BOOKS :

1. B.Sc physics, VOL .4, Telugu academy , Hyderabad.
2. Molecular structure and spectroscopy by G.Aruldas. prentice Hall of india , New Delhi.
3. Modern physics by R.Murugeshan and Kiruthiga siva prasanth. S. Chand & co.
4. Modern physics by G.Aruldas & p. Rajagopal. Eastren economy edition.
5. Concepts of Modern physics by Arthur Beiser. Tata Mcgrew – Hill Edition.
6. Quantum Mechanics, Mahesh c Jain , Eastern Economy EDITION
7. Nuclear Physics ,Irving Kaplan, Narosa Publishing House.
8. Nuclear physics , D.C Tayal, Himalaya publishing house.
9. Elements of solid state physics, J.P srivastava, Prentice Hall of india pvt. Ltd.
10. Solid state physics, A.J.Dekkar, McMillan India.

The Guidelines to be followed by the question paper setters in Physics for the V Semester - end exams

PAPER TITLE: Modern Physics

Paper- VI Semester – V Maximum marks: 70 marks Duration: 3Hours
Weightage for the question paper

Syllabus	Section-A (Short answer questions)	Section-B (Essay questions)
Unit-1 (25 Marks)	T	2
Unit-2 (20 Marks)	T+P	1
Unit-3 (25Marks)	T	2
Unit-4 (20 Marks)	T+T	1
Unit-5 (30 Marks)	T+P	2

Note: T means one theory question, P means one problem

- **Section-A** contains 6 short questions and 2 problems out of these 8 questions, the student has to answer any 4, each question carries 5 marks.
- **Section – B** contains 8 essay questions; the student has to answer any 5 questions. Each question carries 10 marks.

The Question papers setters are requested to cover all the topics in the syllabus as per the weightage given by us.

SEMESTER – V	COURSE CODE : PHY-502
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Duration : 3Hours

Maximum marks : 70

Pass marks : 28 marks

III B.Sc. Physics – V Semester – Paper –VI (2020 – 2021)

Modern Physics

Paper Code : PHY 502C

SECTION-A

Answer any FOUR questions

(4x5=20M)

1. Write the Draw backs of Bohr's atomic model.
2. Explain deBroglie concept of matter waves.
3. Explain Geiger-Nuttal law.
4. Write a note on liquid drop model.
5. Explain Meissner effect in super conductivity.
6. State postulates of Quantum Mechanics.
7. In a crystal lattice plane cuts intercepts $2a$, $3b$ and $6c$ along the three axes where a, b and c are primitive vectors of the unit cell. Determine the miller indices of the given plane.
8. If the uncertainty in position of an electron is $4 \times 10^{-10} \text{m}$ and uncertainty in its momentum is $1.65 \times 10^{-24} \text{kg m/sec}$.

SECTION-B

Answer any FIVE questions :

(5x10=50M)

9. Describe Stern and Gerlach experiment and discuss the importance of the results obtained
10. What is Raman Effect? Write the Experimental setup to study Raman Effect.
11. Describe Davisson and Germer Experiment on electron diffraction. Discuss the results of the Experiment.
12. Derive Time independent Schrodinger wave equation.
13. Calculate the energy of a particle in one dimensional box using Schrodinger equation.
14. Mention the Basic Properties of Nucleus with reference to Size, Charge, Mass, Nuclear spin and Electric Quadra pole Moment.
15. Describe X-Ray diffraction by Laue's method.
16. Explain Type-I and Type-II Superconductors.

Exam duration : 3Hours

Maximum marks : 50 marks

Work load : 30 hrs

3 hrs.

Minimum of 6 experiments to be done and recorded

1. e/m of an electron by Thomson method.
2. Determination of Planck's Constant (photocell)
3. Verification of inverse square law of light using photovoltaic cell.
4. Study of absorption of α – rays.
5. Study of absorption of β – rays.
6. Determination of range of β – particles.
7. Determination of M & H.
8. Analysis of powder X- ray diffraction pattern to determine properties of crystals.
9. Energy gap of semiconductor using junction diode.
10. Energy gap of a semiconductor using Thermistor.

**A.G& S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE**

VUYYURU-521165, KRISHNA Dt., A.P.(Autonomous)

Accredited by NAAC with "A" Grade

2020-2021



DEPARTMENT OF POLITICAL SCIENCE

MINUTES OF BOARD OF STUDIES


ODD SEMESTER

15-07-2020

Minutes of the meeting of the Board of Studies in Political Science of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held in Online mode using SiscoWebex at 10.30 A.M on Wednesday the 15th July 2020 from the Department of Political Science.

Dr. G. Veerraju, HOD, Political Science presided over the BOS meeting

Members Present:

1)..........Chairman
Science
(Dr. G. Veerraju)
Science

Head, Department of Political
AG & SG S Degree College of Arts &
Vuyyuru-521165

2).....University
(Dr.K.Raviteja) Nominee

Head Department of Politics The
Hindu College Machilipatnam

3).....Academic Council Principal and Head, Department of
Political Science
(Sri Dr .G.David Livingston) Nominee

Science DN.R College Bhimavaram

4).....Academic Council
(Dr.D.Chilakamma) Nominee

Lecturer in Political Science
Sir C.R.Reddy College Eluru

AGENDA

1. To review and recommend changes to the syllabi, model paper and guidelines in the 1st, 3rd and 5th semesters of B.A ;
2. To recommend the guidelines to be followed by the Question Paper Setters in Political Science for all semester-end exams;
- 3 To recommend the teaching and the evaluation methods to be followed under the Autonomous System.
4. To suggest innovative methods of teaching; and

- 5 To propose the panel of Question Paper Setters and Examiners.

Resolutions

1. It is resolved include introduction to Political Science in place of basic concept of political science for semester I and include Indian Government and Politics in place of Indian Constitution for III semester for the first & Second degree Students from the academic year 2020-2021

2. It is resolved to continue to the existing syllabus with out making any changes for V semester of B.A.

3. It is resolved adopt 30 marks for internal assessment and 70 for external assessment in V semester from the academic year 2020-2021.

4) It is Resolved to adopt the following teaching and evaluation methods:

A) Teaching methods:

Besides the conventional methods of teaching, it is also resolved to use various other methods like group discussions, quiz, developing power point presentations etc, for the better understanding of the contents.

B) Evaluation of present III year students is to be done by the following procedure:

a) Internal Assessment Examinations:

i) Out of maximum 100 marks in each paper, 30 marks shall be allocated for internal assessment;

ii) Out of these 30 marks, 20 marks are allocated for internal tests. The two tests will be conducted and average of these two tests shall be deemed as the marks obtained by a student, 5 marks are allotted for assignments/seminars and remaining 5 marks are allotted for attendance

Internal Assessment for I&II BA Students

i) Out of maximum 100 marks in each paper, 30 marks shall be allocated for internal assessment.

ii) Out of these 30 marks, 20 marks are allocated for internal tests. The two tests will be conducted and average of these two tests shall be deemed as the marks

obtained by a student, Innovative Component like Assignments/quiz/Seminars/presentations/viva voce/group activity/miniproject/ Exhibitions ..Etc is for 5 marks and remaining 5 marks are allotted for attendance.

b) Semester-End Examinations:

i) The maximum marks for Semester-End examinations shall be 70 for I,II&III BA Students, the duration of the examination shall be 3 Hours.

ii) Semester-End examinations shall be conducted at the end of every semester.

7) To organize Seminars, Guest lectures, and Workshops to upgrade the knowledge of students and to C impart new skills of learning as frequently as possible.

8) It is resolved to Authorize the Chairman of Board of Studies to suggest the Panel of Paper setters and Examiners to the Controller of Examinations as per the requirement.

9 It is resolved to Authorize the Chairman Board of Studies to make any changes According to

the Changes/ guidelines of the Competent authority in view of corona virus


Chairman

(An Autonomous College in the jurisdiction of Krishna University , Machilipatnam)

Title of the paper: **INTRODUCTION TO POLITICAL SCIENCE**

Semester-I

Course Code	POLTIIB	Course Delivery Method	Class Room
Credits	4	CIA Marks	25
No.of Lecture Hours/Week	5	Semester End Exam Marks	75
Total Number of Lecture Hours	60	Total Marks	100
Year of Introduction 2020-2021	Year of offering	Year of Revision	Percentage of Revision 0%

Course Context and overview: To train students in order to have clear understanding of politics, related concepts such as government, state sovereignty, legitimacy, power, influence, authority, democracy, power, political participation, political system etc.

COURSE OUTCOMES: INTRODUCTION TO POLITICAL SCIENCE

Course Outcomes: At the end of the course the student will be able to:

CO1: Define important field-specific theories and concepts, and understand their role in developing political science Knowledge: L-1 , L-2

CO2: Summarize conceptual arguments or theoretical approaches. L-3 , L-4

CO3: Apply them to field relevant situations and support their application with appropriate evidence. L-3, L-4

CO4: Compare and evaluate the merits of multiple policies, theories or concepts from different disciplinary perceptions. L-5

CO5: With the course, students are expected to learn the political concepts and theory in the Basic Concepts of Political Science. L-1, L-2

Learning Outcome:

On successful completion of the course the students will be able to:

- Recall the previous knowledge about Political Science and understand the nature and scope, traditional and modern approaches of Political Science.
- Understand concepts intrinsic to the study of Political Science.
- Have a solid theoretical understanding of Rights and its theories along with the basic aspects of certain political ideologies.
- Apply the knowledge to observe the field level phenomena.

UNIT:I INTRODUCTION:

15hrs.

1. Definition, Nature, Scope and Importance of Political Science - Relations with allied Disciplines (History, Economics, Philosophy and Sociology)
2. Approaches to the study of Political Science:
Traditional Approaches- Historical, Normative and Empirical Approaches.
Modern Approaches: Behavioral and System Approach.

UNIT-II: STATE :

15 hrs

Definition of the State, Elements of the State, Theories of Origin of the State-(Divine Origin , Force, Evolutionary and Social Contract),

1. Concepts of Modern State and Welfare State.

UNIT-III: CONCEPTS OF POLITICAL SCIENCE:

10 hrs

1. Law, Liberty,
2. Power, Authority and Legitimacy

UNIT:IV: THEORIES OF RIGHTS:

10 hrs

1. Meaning, Nature and Classification of Rights
2. Theories of Rights.

UNIT:V:POLITICAL IDEOLOGIES:

10 hrs

1. Liberalism, Individualism and Anarchism.
2. Socialism, Marxism and Multiculturalism.

REFERENCE BOOKS:

1. Sukhbir Bhatnagar : Constitutional Law and the Governance
2. A. C. Kapur : Select Constitution
3. R.C. Agarwal : Political Theory
4. Vidyadhar Mahajan : Political Theory(Principles of Pol.Sci.
5. Devi & V. Bhogendra Acharya,
6. Prof. V. Ravindra Sastry (ed) : Political Science Concepts, Theories & Institutions.
7. Jadi Musalaih, V. Vasundhara
8. Laski H.J. : Grammar of Politics
9. A. Appadorai : Substance of Politics
10. Eddy Ashirvadam K.K. Misra : Political Theory
11. Sushila Ramaswamy : Political Theory: Ideas & Concepts
12. S.P. Varma : Modern Political Theory
13. O.P. Gauba : An Introduction to Political Science
14. Abbas, Hoveyda & Ranjay Kumar : Political Theory
15. Andrew Hakes : Political Theory, Philosophy, Ideology Science.
16. Rajeev Bhargava & Ashok Acharya (ed) : Political Theory An Introduction
17. Andrew Heywood : Political Ideologies-An Introduction
18. Norman Barry : An Introduction to Modern Political theory.

F6
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Reaccredited at 'A Grade by NAAC

MODEL QUESTION PAPER (Semester-I) Course Code : POLTIIB

Time: 3 Hours

Max. Marks : 75

SECTION -A

Answer any five of the following questions.

Each carries FIVE marks :

(5X5=25 Marks)

1. What is Political Science? L1- CO1
2. System Approach? L1 - Co1
3. Explain Divine Origin Theory. L1 – L2-Co2
4. Discuss 'Hobbes views on Human Nature. L5-Co2
5. Describe the features of Welfare State. L5 – CO2
6. Explain the features of Modern State. L2-CO2
7. Explain the meaning and sources of Law. L2-Co3
8. Explain the types of Authority. L2,CO3

SECTION -B

Answer the following : Each carries TEN marks.

(5x10=50 Marks)

9.(a) Define Political Science and explain its Scope. L1-CO1

(or)

(b) Explain the 'Normative Approach' to the study of Political Science. L2-L4-CO1

10 (a) Define State and Elements its characteristics. Co2-L1

(or)

(b) Critically examine the Social Contract Theory of Hobbes. L1-L2-CO1

11. (a) What is Liberty? What are the kinds of Liberty? L2-L4-CO3

(or)

(b) Define Legitimacy and kinds of Legitimacy. L1-L2-COCo3

12. (a) 'Rights and Duties are the two sides of the same Coin' - Discuss. L1-L5-Co4

(or)

(b) Define Right and discuss various kinds of Rights. L2-CO4

13. (a) Critically examine 'Communism'. L5-Co5

(or)

(b) Explain the "Multiculturalism". L2-L3-Co1-Co5

New syllabus

B.A. POLITICAL SCIENCE SECONDYEAR

THIRD SEMESTER (Under CBCS w.e. 2020-21)

Course-3: INDIAN GOVERNMENT AND POLITICS

Course Code	POLT301C	Course Delivery Method	Class Room
Credits	4	CIA Marks	30 ²⁵
No.of Lecture Hours/Week	5	Semester End Exam Marks	70 ⁷⁵
Total Number of Lecture Hours	60	Total Marks	100
Year of Introduction 2020-2021	Year of offering 2021-2022	Year of Revision 2021-2022	Percentage of Revision 0%

Course Outcomes:

- CO1: The students community has acquired knowledge of the making of the Indian Constitution and its philosophical background. L1
- CO2: Information about the functionaries of the government both at the union and state level was acquainted by the student community.L1, L2
- CO3.To Understand the legislative procedures which ensure the orderly conduct of business in our parliament and state legislative assemblies in India.
- CO4: To understand know the Ministers, their role & responsibilities.L1,
- CO5: To understand Judiciary of India.L1, L2

Learning Outcomes:

On successful completion of the course the students will be able to:

- Acquire knowledge about the historical background of Constitutional development in India, appreciate philosophical foundations and salient features of the Indian Constitution.

- Analyze the relationship between State and individual in terms of Fundamental Rights and Directive Principles of State Policy.
- Understand the composition and functioning of Union Government as well as State Government and finally
- Acquaint themselves with the judicial system of the country and its emerging trends such as judicial reforms.

UNIT-I :	SOCIAL AND IDEOLOGICAL BASE OF THE INDIAN CONSTITUTION	15 hrs
	1. Constitutional Development in India during British Rule-A Historical	
	2. Constituent Assembly-Nature, Composition, Socio-Economic, Philosophical Dimensions and Salient Features of the Indian	

UNIT-II	INDIVIDUAL AND STATE	15 hrs
	1. Fundamental Rights, Directive Principles of State Policy and Fundamental Duties-Differences between Fundamental Rights and Directive Principles of State Policy.	
	2. The 'Doctrine of Basic Structure of the Constitution' with reference to Judicial Interpretations and Socio-Political Realities.	
UNIT-III :	UNION EXECUTIVE	10 hrs
	1. President of India-Mode of Election, Powers and Functions.	
	2. Parliament-Composition, Powers and Functions, Legislative Committees, Prime Minister and Council of Ministers-Powers and	

UNIT-IV :	STATE EXECUTIVE	10 hrs
	1. Governor-Mode of Appointment, Powers and Functions.	
	2. Legislature-Composition, Powers and Functions, Chief Minister and	

UNIT-V :	THE INDIAN JUDICIARY	10 hrs
	1. Supreme Court-Composition and Appointments, Powers and	
	Functions or Jurisdiction of the Supreme Court, Judicial Review, Judicial	
	2. High Court-Composition, Powers and Functions, Debates on the	
	mode of appointment of Judges-National Judicial Appointments	

A.G &S.G SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
[AUTONOMOUS] VUYYURU-521165

SEMESTER-III

CODE-POLT301C ACADEMIC YEAR-2020-2021

PAPER TITLE: INDIAN GOVERNMENT AND POLITICS

Duration: 3 Hours

Maximum Marks:70

Pass Marks:28

Section-A

Answer any **Two** of the following questions

(2x5=10 Marks)

1. Explain the Indian Government act of 1935.
2. Describe the Fundamental duties of Indian citizens.
3. Discuss the various Legislative committees.
4. Judicial Review.

Section-B

Answer any **Four** of the following questions

(4x15=60 Marks)

5. Explain the salient features of the Indian Constitution.
6. Explain the Fundamental Rights of the Constitution.
7. Explain the powers and Functions of the President of India.
8. Explain the powers and Functions of Chief Minister.
9. Describe the structure and Functions of Supreme Court of India.
10. Explain the powers and Functions of Prime Minister.
11. Explain the Directive Principles of the state policy in Indian Constitution.
12. Explain the powers and Functions of Governor.

SEMESTER – V

COURSE CODE: POL – 501C

PAPER TITLE : PAPER-V (CORE): INDIAN POLITICAL THOUGHT

External: 75

Internal: 25

Unit -I:

1. Manu:

- a. Social laws
- b. danda neethi

2. Kautilya:

- a. kingship
- b. Mandala Theory
- c. Saptanga Theory

UNIT – II

1. Gandhi:

- a. Non-violence, Satyagraha.
- b. Theory of Trusteeship.

2. Joythi Rao Pule: Social reform

UNIT – III

Nehru:

- a. Democratic Socialism.
- b. Non-Alignment

Ambedkar:

- a. views on Indian Society.
- b. Social Movements.

UNIT – IV

M.N. Roy:

Radical Humanism

Jaya Prakash Narayan:

- a. Total Revolution.
- b. Sarvodaya.

Text Books

1. "Rajaneethi Thatvavicharam": A Text Book by Telugu Academy.

Reference books:

1. Pantham Thomas and Kenneth Deutsch(Ed)(1986)
Political thought in modern India, Sage, New Delhi

2. Bidyut Chakrabarty and Rajendra Kumar Pandey (2009) modern Indian political thought, Sage, New Delhi
3. Gurpreet Mahajan (2013), India : Political ideas and making of a democratic discourse, zed book, London
4. Partha Chatterjee (1986) nationalist thought and the colonial world: A derivative disclosure, zed books, London
5. Bhikhu Parekh (1999) colonialism, tradition and reform, Sage, New Delhi
6. Bhikhu Parekh (1989) Gandhi's political philosophy, Macmillan, London.

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POLITICAL SCIENCE	POL 501C	2020-21	III BA
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EXAMINATION AT THE END OF FIFTH SEMESTER

SEMESTER – V

TIME: 3 HRS

PAPER – V

MAX. MARKS: 70

Model Paper

Indian Political Thought

Section – A

ANSWER any TWO OF THE FOLLOWING.

(2 × 5 = 10)

- 1) DANDA NEETHI.
- 2) write about Koutilya's Saptanga.
- 3) Explain Gandhi's Theory of Trusteeship
- 4) DR. AMBEDKAR'S ANNIHILATION OF CASTE.

Section – B

Answer any FOUR of the following.

(4 × 15 = 60)

- 5) Explain Manu's classification of Varna.
- 6) Explain the mandala theory of kautilya.
- 7) State and criticize Gandhi's satyagraha and non-violence.
- 8) Write an essay on social movements led by Dr. Ambedkar.
- 9) Write an essay on mahatma Jyothirao Phule
- 10) Discuss Jawaharlal Nehru's views on Democratic Socialism.
- 11) Briefly explain Jaya Prakash Narayan's total revolution
- 12) Write about M.N. Roy's radical humanism

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
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SEMESTER – V

COURSE CODE: POL – 502C

PAPER TITLE : PAPER-VI (CORE): WESTERN POLITICAL THOUGHT

No. of Hours per week: 6

Max. Marks: 100

No. of Credits: 4

External: 75

Internal: 25

Unit-I: Plato:

- a. Theory of Justice
- b. Education System
- c. Philosopher -King
- d. Theory of Communism

Unit-II: Aristotle:

- a. Ideal state
- b. Theory of Revolutions.
- c. Classification of governments

Unit-III:

1. Machiavelli-political Ideas, Advice to the Prince
2. Thomas Hobbes: Human nature, Social Contract, Sovereignty
3. John Locke: Natural Rights and Social Contract,
4. Rousseau: Social Contract and General Will

Unit-IV:

1. **Hegel:** Civil Society, State
2. **Karl Marx:** Surplus Value, Materialist Conception of History, State

Reference books:

1. Shefali Jha (2010) Western Political Thought from Plato to Karl Marx, Pearson, New Delhi
2. Boucher D and Kelly P (Eds) (2009) Political Thinkers from Socrates to the Present, Oxford University press, oxford
3. Coleman J (2000) A History of Modern Political Thought: From Ancient Greece to early Christianity, Blackwell publishers, oxford
4. Macpherson C B (1962) The Political Theory of Possessiveness Individualism, Oxford University press, oxford
5. Hampsher-monk I (2001) A History of Modern Political Thought: Major Political Thinkers from Hobbers to Marx, Blackwell publishers, oxford

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POLITICAL SCIENCE	POL 502C	2020-21	III BA
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EXAMINATION AT THE END OF FIFTH SEMESTER

SEMESTER – V

TIME: 3 HRS PAPER
MAX. MARKS: 70

Model paper

Western political thought

Section – A

I. Answer any two of the following

(2 × 5 = 10)

- 1) Philosopher-king
- 2) What are the views of hobbes on human nature.
- 3) Theory of natural rights
- 4) Examine mark's views on class War

Section – B

II. Answer any Four of the following.

(4 × 15 = 60)

- 5) Explain the features of plato's education
- 6) Analyze aristotle's views on revolutions.
- 7) What are qualities of a Prince suggested by Machiavelli?
- 8) Social Contract Theory of Rousseau
- 9) Social Contract Theory of Hobbes
- 10) Explain Plato's Theory of Justice
- 11) Plato system of education
- 12) Karl Marx's Theory of Communism.

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2020-2021




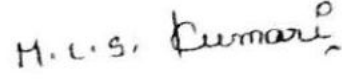
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MINUTES OF BOARD OF STUDIES**

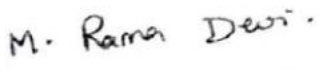
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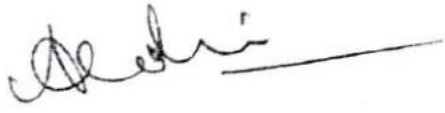
హాజరైన సభ్యులు :

1. శ్రీ జి. శ్రీనివాస్, 
తెలుగు కాఖాదిపతి, పాఠ్య నిర్ణాయక మండలి అధ్యక్షులు.

2. శ్రీమతి ఎమ్. ఎల్. ఎస్. కుమారి, 
తెలుగు అధ్యాపకురాలు.

3. శ్రీమతి ఎమ్. రమాదేవి, 
తెలుగు అధ్యాపకురాలు.

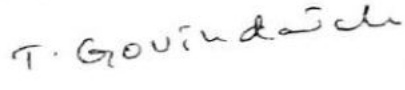
4. డా. ఎ. కేదారి,
తెలుగు కాఖాదిపతి,
గవర్నమెంటు డిగ్రీ కళాశాల, పామర్రు.



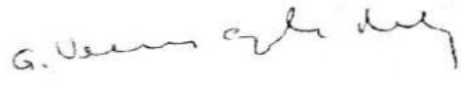
5. డా. కె. సుధాకర్,
తెలుగు కాఖాదిపతి,
ఎస్. ఎస్ & ఎస్ కళాశాల, నరసరావు పేట, గుంటూరు.
విషయ నిపుణులు (Subject Expert).



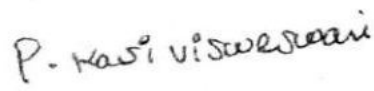
6. డా. టి. గోవిందయ్య,
తెలుగు కాఖాదిపతి,
మార్కింగ్ స్టాఫ్ కళాశాల, వీరంగిపురం, గుంటూరు.
విషయ నిపుణులు (Subject Expert).



7. శ్రీ. జి. వేణు గోపాలరెడ్డి,
తెలుగు అధ్యాపకులు, సాహితీ ప్రతినిధి.
ఎ.జి & యస్. జి. యస్ జూనియర్ కళాశాల, ఉయ్యూరు.



8. పి. కాళి విశ్వేశ్వరం,
విద్యార్థి ప్రతినిధి.



యూనిట్ -1

మదుర స్నేహం - పోతన

ఆంధ్ర మహాభాగవతం - దశమ స్కంధము (962 - 983) పద్యాలు

ప్రతి పద్యాలకు ఇవ్వవలసిన పద్యాలు

1. వరదుడుసనూన సంపదల్.
2. కలలో నందను సంపద్విశేషోన్నతుల్.
3. కనిదాయం జనునంత దల్పమున్.
4. తన మృదుతల్పమందు బాగ్యవంతుడే.

యూనిట్ - II

రాజసీత - నన్నయ

మహాభారతం - సభాపర్వం - ప్రథమాశ్వాసం- (26 - 57) పద్యాలు

ప్రతి పద్యాలకు ఇవ్వవలసిన పద్యాలు

1. కడు జనువాడు దుర్విమోహమున్.
2. ఉత్తమ మధ్యమాధమ దప్పకుండగన్.
3. బహు దన దాన్య దుర్గముల్.
4. వదలక బుద్ధి నిర్ఘాతములన్

యూనిట్ - III

దోమ్య దర్శోపదేశం - తిక్కన

మహాభారతం - విరాటపర్వం - ప్రథమాశ్వాసం -(116 - 146) పద్యాలు

యూనిట్ - IV

సుభద్రాపరిణయం - చేమకూర వేంకటకవి

విజయ విలాసం - తృతీయాశ్వాసం -(93 -139) పద్యాలు

యూనిట్ - V

సీతారావణ సంవాదం - మొల్ల

రామాయణము - సుందరకాండము -(40 -87) పద్యాలు

వ్యాకరణము :-

సంస్కృతసంధులు :- సువర్ణదీర్ఘసంధి, గుణసంధి, యణాదేశసంధి, వృద్ధి సంధి.

తెలుగు సంధులు :- ఉకారసంధి, త్రికసంధి, ద్విరుక్తకారసంధి,

గసడదవాదేశసంధి.

సమాసాలు :- తత్పురుష, కర్మధారయ, ద్వంద్వ, ద్విగు, బహువ్రీహిసమాసములు.

అలంకారాలు :-

అర్థాలంకారాలు :- ఉపమ, ఉత్పేక్ష, రూపక, స్వభావోక్తి, అతిశయోక్తి, శ్లేష.

శబ్దాలంకారాలు :- వృత్తనుస్రాస, చేకానుస్రాస, లాటానుస్రాస, అంత్యానుస్రాస.

ధందస్సు :-

వృత్తాలు :- ఉత్పలమాల, చంపకమాల, శార్దూలము, మత్తేభము.

జాతులు :- కందం.

ఉపజాతులు :- ఆటవెలది, తేటగీతి.

Time : 3 Hours

Marks : 70

పాఠ్య - ఎ

1. ఈ క్రింది పద్యాలలో ఒక దానికి సందర్భ సహిత, ప్రతిపదార్థ, తాత్పర్యాలను రాయండి.

1 x 8 = 8 మా

- ఎ. వరదుడు సాదు భక్తజన వత్సలు ధార్త శరణ్యుడిందిరా
వరుడు దయా పయోధి భగవంతుడు కృష్ణుడు ధా గుశస్థలీ
పురమున యాదవ ప్రకరముల్ భజింయింపగ నున్నవాడు నీ
వరిగిన మిమ్ము జుచి విభుడప్పుడ యిచ్చు ననూన సంపదల్
- బి. కడు జనువాడు నై పురుషకార్యు దక్షుడునైన మంత్రి పెం
పడరగ రాజపుత్రుల మహాదనవంతుల జేసి వారితో
నొడబడి పక్షమేర్పడగ నుండడుగా ధనమెట్టి వారికిం
గడుకొని చేయకుండునె జగన్నుత గర్వము దుర్వమోహమున్.

2. ఈ క్రింది వానిలో నాల్గింటికి సందర్భ సహిత వ్యాఖ్యలు రాయండి.

4 x 3 = 12 మా

- ఎ. చనియె గోవింద దర్శనోత్సాహి యగుచు
బి. దరణి సురుడెంతటి బాగ్యవంతుడో
సి. పంచితే నీవు వారిదైనసేర్పెటింగి
డి. వార్త యందు జగము వర్తిల్లుచున్నది
ఇ. అందరకును జెప్పంగ వలయు దగియెడు బుద్ధుల్
ఎఫ్. కలిసి పలుక వలయు దరణిశు కడన్.
జి. ఒడలెల్ల గన్నులుగ జుచిరి.
హచ్. దొరికెను సుభద్ర మంచి కాపురము నీకు.
ఐ. రాముడే రీతి లంకకు రాగలడు.
జె. చెప్ప నేటికి నీవె చూచెదవు గాక.

పాఠ్య - బి

3. ఈ క్రింది ప్రశ్నలలో మూడింటికి వ్యాసరూప సమాధానాలు రాయండి.

3 x 10 = 30 మా

- ఎ. శ్రీ కృష్ణుడు బాల్యసఖుని ఆదరించిన విధానం తెలపండి.
బి. నారదుడు దర్మరాజుకు చెప్పిన రాజనీతి విషయాల గురించి వివరించండి.
సి. ధౌమ్యుడు పాండవులకు చేసిన ధర్మోపదేశాన్ని వివరించండి.
డి. సుభద్రా పరిణయ వృత్తాంతాన్ని వివరించండి.
ఇ. సీతా రావణ సంవాదాన్ని వివరించండి.

4. ఈ క్రింది వానిలో రెండింటిని విడదీసి, సంది పేరు, సూత్రాలను రాయండి.

2 x 3 = 6 మా

- ఎ. నిజాధినాధుడు
- బి. దేవోత్తములు
- సి. వేడుకసేయు
- డి. అమ్మానిని

5. ఈ క్రింది వానిలో రెండింటికి విగ్రహవాక్యము రాసి, సమాసాల పేర్లు రాయండి.

2 x 2 = 4 మా

- ఎ. బీమార్జునులు
- బి. శిదిల వస్త్రము
- సి. రాజీవనేత్రుడు
- డి. పారిజాత పుష్పములు

6. ఈ క్రింది పద్య సాదానికి గణ విభజన చేసి, ఏ పద్యసాదమో తెల్పి యతి, ప్రాసలను గుర్తించండి.

5 మా

ఎ. ఏమి తపంబు చేసి నొక యా దరణి దివిఠోత్తముండుదోల

(లేదా)

బి. ఈ క్రింది వానిలో ఒక దానికి లక్షణాన్ని తెల్పి ఉదాహరణలో సమన్వయించండి.

- ఎ. ఉత్పలమాల
- బి. తేటగీతి.

7. ఎ. ఈ క్రింది అలంకారాలలో ఒక దానికి లక్షణాన్ని తెలిపి ఉదాహరణలో సమన్వయం చేయండి.

5మా

- ఎ. ఉపమాలంకారము
- బి. అంత్యానుప్రాసాలంకారము

(లేదా)

బి. ఈ క్రింది పద్యములో ఉన్న అలంకారాన్ని గుర్తించి లక్షణ సమన్వయం చేయండి.

చూరి గుణ సాంధ్రు యదుకులాంబోదిచంద్రు

విష్ణురోచిష్ణు జిష్ణు సహిష్ణు గృష్ణు

.....

పాఠ్య - ఎ

1వ ప్రశ్న:- సందర్భ, సహిత, ప్రతి పదార్థ, తాత్పర్యాలు.

మధుర స్పృహ మరీయు రాజనీతి పాఠాలలోని ఈ క్రింది పద్యాల నుండి ఒక్కొక్కటి చొప్పున 2 అవ్వవలెను.

పాఠం ఏడు:- మధురస్పృహం.

1. వరదుడు సమాన సంపదల్.
2. కలలో నందను సంపద్యకేచోన్నతుల్.
3. కవిదాయం జనునంత దల్పమున్.
4. తన మృదుతల్యమందు బాగ్యవంతుడే.

పాఠం ఏడు:- రాజనీతి.

1. కడు జనువాడు దుర్విమోహమున్.
2. ఉత్తమ మధ్యమాధమ దప్పకుండగన్.
3. బహు దన దాస్య దుర్గముల్.
4. పదలక బుద్ధి నిర్మితార్ములన్.

2వ ప్రశ్న:- సందర్భ సహిత వ్యాఖ్యలు

మధుర స్పృహం, రాజనీతి, ధౌమ్యధర్మోపదేశం, సుభద్రా పరిణయం, సీతారావణ సంవాదం పాఠాలలో ప్రతి దాని నుండి 2 చొప్పున మొత్తం 10 అవ్వవలెను.

పాఠ్య - బి

నూతన:- 3వ ప్రశ్నలో ఉన్న వ్యాసరూప సమాధానాలలో కవి గురించి, కవితా చైత్రవం గురించి ప్రశ్నలు అవ్వకూడదు.

3వ ప్రశ్న:- మధుర స్పృహం, రాజనీతి, ధౌమ్య ధర్మోపదేశం, సుభద్రా పరిణయం, సీతారావణ సంవాదం 5 పాఠాల నుండి ఒక్కొక్క ప్రశ్న చొప్పున 5 ప్రశ్నలు అవ్వవలెను.

4. సందులు:- సీలబస లో ఉన్న తెలుగు సందుల నుండి 2 సీలబస లో ఉన్న సంస్కృత సందుల నుండి 2 మొత్తం 4 పదాలను అవ్వవలెను.

5. సీలబస లో ఉన్న విధంగా 4 సమాస పదాలను అవ్వవలెను.

6. ఎ. ధందస్సు:- గణవిభజన కొరకు వృత్త పద్యాల నుండి మాత్రమే ఒక పద్య పాదమును అవ్వవలెను.

బి. ధందస్సు:- పద్య లక్షణాల కొరకు వృత్త పద్యాల నుండి 1, జాతులు, ఉప జాతుల నుండి 1 మొత్తం 2 అవ్వవలెను.

7. ఎ. ఆలంకారం:- ఆలంకార లక్షణాల కొరకు సీలబస లో ఇచ్చిన విధంగా ఆర్థ ఆలంకారాల నుండి 1, శబ్ద ఆలంకారాల నుండి 1 మొత్తం 2 అవ్వవలెను.

బి. ఆలంకారం:- ఆలంకార లక్షణ సమన్వయం కొరకు మధుర స్పృహం, రాజనీతి పాఠాల నుంచి మాత్రమే 1 పద్యం అవ్వవలెను.

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TELUGU 301

2020-21 II DEGREE B.A., B.COM., B.SC.,

No. of Hrs. : 4

III SEMESTER – SYLLABUS

Credits: 3

I. ప్రాచీన కవిత్వం

1. వామనావతారం - పోతన - ఆంధ్రమహాభారతం - అష్టమస్కంధం (582-621) "కులమున్ రాజ్యము" నుండి "రవిబింబంబుపమింప" వరకు
(ప్రతి పద్యాలకు ఇవ్వదగిన పద్యాలు)
 1. కారే రాజులు రాజ్యముల్ ----- యిక్కాలమున్ భార్గవా !
 2. నిరయంబైన నిబంధమైన ----- దీవర్య! వే యేటికిన్.
 - 3 . అమరాఠి కరాక్షతోజ్జిత ----- విన్యస్తమున్ హస్తమున్.
 4. రవిబింబం బుపమింప ----- బ్రహ్మాండమున్ నిండుచోన్.
2. శాలివాహన విజయం - కొఱవి గోపరాజ సింహాసన ద్వైతశిక - ప్రథమాశ్వాసం (115 -165) "సజ్జిత దాన ధర్మ " నుండి "ఇట్లు విక్రమార్కుడీల్గిన " వరకు.
(ప్రతి పద్యాలకు ఇవ్వదగిన పద్యాలు)
 1. సజ్జిత దానధర్మ ----- రాజ్యము సేయుచుండగన్.
 2. అర్కుని మూర్తి ----- బంపునావుడన్.
 3. సత్పాత్ర ప్రతి పాదితార్థు----- నుల్కాదిలక్ష్యంబులై.
 4. వరపుత్రుం డమరేంద్రవైరి----- డేటు వాటిల్లదె.

II. ఆధునిక కవిత్వం

1. కుసుమ దర్శన - హరిజన శతకం (1 -20) "శ్రీహరి సుత నీదు" నుండి "నీ కులంబు వారు" వరకు
2. డా॥ అంద్రశ్రీ - మనిషి - మాయమైపోతున్నడమ్మా నుండి - ఇనుపరెక్కల డెగ వరకు.

III. గద్యభాగం (వ్యాస సంపుటి)

1. ఆచార్య గుఱ్ఱమూడి కృపాచారి - తెలుగు భాష
2. ఆచార్య రాచపాళం చంద్రశిఖర రెడ్డి - వ్యక్తిత్వ వికాసం

IV. ఛందస్సు

ఉత్పలమాల, చంపకమాల, శార్దూలం, మత్తేభం, కందం, తేటగీతి ఆటవెలది.

V. అలంకారాలు

అర్థాలంకారాలు:- ఉపమ, ఉత్పేక్ష, రూపక, స్వభావోక్తి, అతిశయోక్తి, అర్థంతరన్యాస, శ్లేష.

శబ్దాలంకారాలు:- వృత్త్యానుప్రాస, అంత్యానుప్రాస, యమకం.

సంప్రదించవలసిన పుస్తకం: సాహితీ స్రవంతి (బి.ఎ., బి.కాం., బి.యస్.సి. రెండవ సంవత్సరం తెలుగు వాచకం)

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TELUGU-301

2020-21

II DEGREE B.A., B.COM., B.SC.,

No. of Hrs. : 4

III SEMESTER – MODEL PAPER

Credits: 3

Time : 3 hrs

Max.Marks : 70.

పాఠ్య - ఎ

1. ఈ క్రింది వానిలో ఒక పద్యానికి సందర్భ సహిత ప్రతిపదార్థ లాత్యర్యాసను రాయండి. 8 మార్కులు

- ఎ. కారే రాజులు రాజ్యముల్ గలుగవే గర్వోన్నతిన్ బొందరే
వారే సీరి మూట గట్టుకొని పోవంజాలిరే భూమిపై
బీ రైనం గలదే శిభిప్రముఖులం బ్రీతిన్ యశ:కాములై
యిరే కోర్కులు వారలన్ మఱచిరే యిక్కాలమున్ భార్గవా!
బి. సజ్జితదానధర్మ గుణచారువిచారుడు వైరిదార దృ
క్రజ్జీలమార్తన ప్రథమకారణ చారుకృపాణపాణి వి
ద్యజ్జనబృందవంది జనతాజలజౌర్కుడు విక్రమార్కు డా
యుజ్జయినీపురంబున నయోన్నతి రాజ్యము సేయుచుండగన్.

2. ఈ క్రింది వానిలో నాల్గింటికి సందర్భ సహిత వ్యాఖ్యలు రాయండి. 4 x 3 = 12 మార్కులు

- ఎ. మాట దిరుగలేరు మానధనులు.
బి. మానధనులకు భద్రంబు మఱియు గలదే
సి. సాహసంబు సెయు సాహసాంక
డి. సర్వ కళల యందు జాణవు నీవండ్రు
ఇ. చీకు చింత లేక చిరజీవులైరయా
ఎఫ్. ధర్మ చింత చచ్చే ధనకాంక్ష హెచ్చె
జీ. రాకాసి రూపాన రంజిల్లుతున్నాడు
హెచ్. జీవకారుణ్యమే జీవితం అంటాడు

పాఠ్య - బి

3. వామనావతార పరమార్థాన్ని వివరించండి. 10 మార్కులు

(లేదా)

శాలివాహన విజయాన్ని నోదాహరణంగా వివరించండి.

4. కుసుమ ధర్మన్న వివరించిన హరిజనుల దీనస్థితిని రాయండి. 10 మార్కులు

(లేదా)

మానవత్వం మర్చిపోతున్న మనిషి గూర్చి డా॥అందెశ్రీ ఆవేదన తెల్పండి.

5. తెలుగు బాష ప్రాచీనతను వివరించండి. 10 మార్కులు

(లేదా)

వ్యక్తిత్వ వికాసం విశిష్టతను వివరించండి.

6. ఈ క్రింది వానిలో ఒక దానికి లక్షణాన్ని తెల్పి, ఉదాహరణతో సమన్వయించండి. 5 మార్కులు

ఎ. ఉత్పలమాల.

బి. తేటగీతి.

7. ఈ క్రింది పద్యపాదాలలో ఒక దానికి గణ విభజన చేసి, ఏ పద్య పాదమో తెల్పి, యతిప్రాసలను గుర్తించండి.. 5 మార్కులు

ఎ. బలిదైత్యేంద్ర కరద్యయిక్యతజల ప్రక్షాళన వ్యాప్తికిన్.

బి. మునిజన నియమాధారను జనితాసుర యువతినేత్ర జలకణధారన్.

8. ఈ క్రింది అలంకారాలలో ఒక దానికి లక్షణాన్ని తెలిపి ఉదాహరణతో సమన్వయం చేయండి. 5 మార్కులు

ఎ. ఉపమాలంకారము.

బి. అంత్యాను ప్రాసాలంకారం.

9. ఈ క్రింది పద్యాలలో ఒక దానికి అలంకారాన్ని గుర్తించి లక్షణ సమన్వయం చేయండి. 5 మార్కులు

ఎ. "పుట్టి నేర్చుకోనెనో పుట్టక నేర్సెనో

చిట్టి బుద్ధులిట్టి పొట్టివడుగు

పొట్టనున్న వెల్ల బూమెలు నని నవ్వి

యలమి ధరణి దాన మిచ్చె నపుడు.

బి. బ్రతుక వచ్చు గాక బహుబంధనములైన

వచ్చుగాక లేమి వచ్చుగాక

జీవధనములైన చెడుగాక పడుగాక

మాటదిరుగలేరు మానధనులు.

**A.G & S.G.Siddartha Degree College of Arts & Science (AUTONOMOUS),
VUYURU – 521 165, Krishna Dist.**

(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam, A.P.India)

Accredited at 'A' NAAC

TELUGU-301

2020-21

II DEGREE B.A., B.COM., B.SC.,

No. of Hrs.: 4

III SEMESTER – GUIDELINES TO PAPER SETTERS

Credits: 3

1వ ప్రశ్న : సందర్భ, సహిత, ప్రతిపదార్థ తాత్పర్యాలు - ప్రాచీన పద్యభాగం 'వామనావతారం' మరియు

శాలివాహన విజయం లోని ఈ క్రింది పద్యాల నుండి ఒక్కొక్కటి చొప్పున మొత్తం 2 ఇవ్వవలెను.

వామనావతారం - బమ్మెర పోతన

- 1.కార రాజలు రాజ్యముల ----- యి క్కాలమున భార్గవా!
- 2.నిరయంబైన నిబంధమైన ----- ధీవర్య! వె యేటికిన్.
- 3.అమరాఠాతి కరాక్షతోజ్జిత ----- విన్యస్తమున్ హస్తమున్.
- 4.రవిబింబం బుపమింప ----- బ్రహ్మాండమున్ నిండుచోన్.

శాలివాహన విజయం - కొఱవి గోపరాజు

- 1.సజ్జిత దానధర్మ ----- రాజ్యము సేయు చుండగన్.
- 2.అర్కుని మూర్తి ----- బంపు నావుడున్.
- 3.సత్పాత్ర ప్రతి పాదితార్థుడయి ----- నుల్కాదిలక్ష్యంబులై.
- 4.వరపుత్రుం డమరేంద్రవైరి ----- బేటు వాటిల్లదే.

2వ ప్రశ్న : సందర్భ సహిత వ్యాఖ్యలు - 'వామనావతారము' నుండి 2, 'శాలివాహన విజయం' నుండి

2, 'హరిజన శతకం' నుండి 2, 'మనిషి' నుండి 2 మొత్తం 8 ఇవ్వవలెను

3వ ప్రశ్న : వ్యాసరూప సమాధాన ప్రశ్న - ప్రాచీన పద్యభాగంలోని 'వామనావతారం' నుండి 1

'శాలివాహన విజయం' నుండి 1 మొత్తం 2 ఇవ్వవలెను

4వ ప్రశ్న : వ్యాసరూప సమాధాన ప్రశ్న - ఆధునిక పద్యభాగంలోని 'హరిజన శతకం' నుండి 1

'మనిషి' నుండి 1 మొత్తం 2 ఇవ్వవలెను.

5వ ప్రశ్న : వ్యాసరూప సమాధాన ప్రశ్న - 'తెలుగు భాష' నుండి ఒకటి, 'వృక్తిత్వవికాసం' నుండి 1

మొత్తం 2 ఇవ్వవలెను.

6వ ప్రశ్న : చందస్సు - పద్య లక్షణాల కొరకు వృత్త పద్యాల నుండి 1 జాతులు, ఉపజాతులు నుండి

1 మొత్తం 2 పద్యాల పేర్లు ఇవ్వవలెను.

7వ ప్రశ్న : చందస్సు - గణవిభజన కొరకు వృత్తపద్యాల నుండి ఒక పద్య పాదము, జాతులు, ఉపజాతుల

నుండి ఒక పద్యపాదము మొత్తం 2 ఇవ్వవలెను.

8వ ప్రశ్న : అలంకారం - అలంకార లక్షణాల కొరకు సెలబస్ లో ఇచ్చిన విధంగా అర్థాలంకారాల నుండి

1 కల్పాలంకారాల నుండి 1 మొత్తం 2 పేర్లు ఇవ్వవలెను.

9వ ప్రశ్న : అలంకార లక్షణ సమన్వయం కొరకు ('వామనావతారం', 'శాలివాహన విజయం' నుండి

మాత్రమే) 2 పద్యాలను ఇవ్వవలెను.

**ADUSUMILLI GOPALAKRISHNAIAH & SUGAR CANE GROWERS
SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU-**

(Autonomous)

Accredited by NAAC with "A" Grade

2020-21



DEPARTMENT OF ZOOLOGY

MINUTES OF BOARD OF STUDIES

04-07-2020 (ODD SEMESTER)


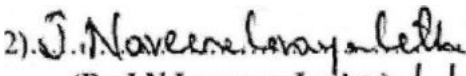
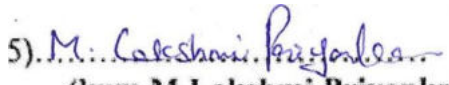
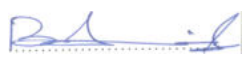
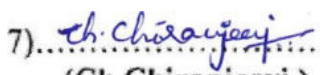


Minutes of the meeting of Board of studies in Zoology for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 11.00 AM on 04-07-2020 in the Department of Zoology.

Smt.D.A. Kiranmayee Members

Presiding

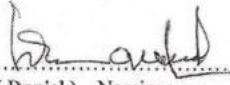
Presents

- 1)  Chair person
(Smt. D.A.Kiranmayee.) Head, Department of Zoology,
A.G&S.G.S Degree College of
Vuyyuru-521165.
- 2)  University Nominee
(Dr.J.N.Lavanya Latha.) 4/7/2020 Krishna University,
Machilipatnam.
- 3) Academic Council
(Dr.K.Daniel) Nominee Head, Dept.of Zoology,
JKC College, Guntur.
- 4) Academic Council
(B.Elia) Nominee Head, Dept.of Zoology,
Govt.DegreeCollege,
Pitapuram.
- 5)  Member
(kum.M.Lakshmi Priyanka.) A.G&S.G.S Degree College
Vuyyuru-521165.
- 6)  Industrialist
(B.Appala Naidu) Asst. ProjectManager.
RGCA
- 7)  Student Represent. P.hd –Research Scholar,
(Ch.Chiranjeevi.) Dept.ofBotany& Microbiology,
Acharya Nagarjuna University,
Guntur

Minutes of the meeting of Board of studies in Zoology for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 11.00 AM on 04-07-2020 in the Department of Zoology.

Smt.D.A. Kiranmayee. ... Presiding

Members Present:

- 1) Chair person . Head, Department of Zoology,
A.G&S.G.S Degree College of Vuyyuru-521165.
(Smt. D.A.Kiranmayee.)
- 2)..... University Nominee Dr. J.N.Lavanya Latha,
(Dr.J.N.Lavanya Latha.)Krishna University,
Machilipatnam.
- 3).....  Academic Council Head, Department of Zoology,
(Dr. K.Daniel.) Nominee JKC College,
Guntur,
- 4)..... Academic Council Head, Department of Zoology,
(B.Elia.) Nominee Gov. Degree College,
Pitapuram.
- 5)..... Member Lecturer in Zoology,
(kum.M.Lakshmi Priyanka.) A.G&S.G.S Degree College
Vuyyuru-521165.
- 6)..... Industrialist Asst. Project Manager,
(B. Appala Naidu.) RGCA
Manikonda.
- 7)..... Student Represent P.hd –Research Scholar,
(Ch.Chiranjeevi.) Dept.of Botany & Microbiology,
Acharya Nagarjuna University,
Guntur.

Minutes of the meeting of Board of studies in Zoology for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 11.00 AM on 04-07-2020 in the Department of Zoology.

Smt.D.A. Kiranmayee. ... Presiding

Members Present:

1) Chair person Head, Department of Zoology,
A.G&S.G.S Degree College of Vuyyuru-521165.
(Smt. D.A.Kiranmayee.)

2)..... University Nominee Dr. J.N.Lavanya Latha,
(Dr.J.N.Lavanya Latha.)Krishna University, Machilipatnam.

3)..... Academic Council Head, Department of Zoology,
(Dr. K.Daniel.) Nominee JKC College, Guntur,

4)..... Academic Council Head, Department of Zoology,
(Dr. B.Elia.) Nominee Gov. Degree College,
Pitapuram.

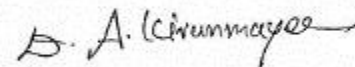
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Vuyyuru-521165.

6)..... Industrialist Asst. Project Manager,
(B. Appala Naidu.) RGCA
Manikonda.

7)..... Student Represent P.hd –Research scholar,
(Ch.Chiranjeevi) Dept.of Botany & Microbiology,
Acharya Nagarjuna University,
Guntur.

Agenda for B.O.S Meeting.

1. To recommend the syllabi (Theory & Practical), Model question paper for I Semester of I B.Sc (B.Z.C) for the academic year 2020 - 2021.
2. To recommend the syllabi (Theory & Practical), Model question paper for III Semester of II B.Sc (B.Z.C) for the academic year 2020 - 2021.
3. To recommend the syllabi (Theory & Practical), Model question paper for V Semester of IIIB.Sc (B.Z.C) for the academic year 2020 - 21
4. To recommend the Blue print for the semester end exam for I, III & V semester of I,II,III B.Sc (B.Z.C) for the academic year 2020 - 21.
5. To recommend the syllabus of Competitive Zoology as Unit VI in I and III semesters.
6. To recommend the syllabus of Certificate Course, Organic Farming to Science and Non-Science students
7. To recommend the teaching and evaluation methods to be followed under Autonomous statues.
8. Any other matter.



Chairman

RESOLUTIONS

1. It is resolved to implement the revised new syllabus (Theory & Practical), model question paper & guide lines to be followed as prescribed by APSCHE in Zoology I semester of I B.Sc. (B.Z.C) under Choice Based Credit System (CBCS).
2. It is resolved to implement the same syllabi (Theory & Practical), model question paper & guide lines to be followed by the question papers under Choice Based Credit System (CBCS) for Zoology III Semester of II B.Sc. (B.Z.C) approved by the Academic Council of 2020 –21.
3. It is resolved to implement the same syllabi & model papers under Choice Based Credit System (CBCS) Setters of Zoology of V semester of III B.Sc. (B.Z.C) to be approved by the Academic Council of 2020-21.
4. It is resolved to continue the same Blue prints of I, III, & V Semesters of B.Sc Zoology for the Academic year 2020-21.
5. It is resolved to follow the syllabus of Competitive Zoology as Unit- VI in I, III Semesters for the Academic year 2020-2021. Questions from the VI-Unit will be given in IA-1, IA-II but not in semester end exams.
6. It is resolved to conduct Certificate course in Organic Farming to Science and Non- Science Students.
7. It is resolved to continue the following teaching & evaluation methods for the Academic year 2020-21.

Teaching methods:

Besides the conventional methods of teaching, we use modern technology i.e. Using of OHP and LCD projector to display on U boards etc; for better understanding of concepts.

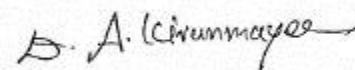
Evaluation of a student is done by the following procedure:

Internal Assessment Examination:

- Out of maximum 100 marks in each paper for I, II, III B.Sc, 30 marks shall be allocated for internal assessment.
- Out of these 30 marks, 20 marks are allocated for announced tests (i.e. IA-1 & IA-2). Two announced tests will be conducted and average of these two tests shall be deemed as the marks obtained by the student, 5 marks are allocated on the basis of candidate's percentage of attendance and remaining 5 marks are allocated for the assignment for I, II, III B.Sc.
- There is no pass minimum for internal assessment for I, II, III B.Sc.

Semester – End Examination:

- The maximum mark for I, II, III B.Sc semester- End examination shall be 70 marks and duration of the examination shall be 3 hours. Even though the candidate is absent for two IA exams / obtain zero marks the external marks are considered (if the candidate gets 40/70) and the result shall be declared as "PASS"
- Semester – End examination shall be conducted in theory papers at the end of every semester, while in practical papers, these examinations are conducted at the end of I, III, & V semester for I, II & III B.Sc.
- Discussed and recommended for organizing Seminars, Guest lectures, Work – Shops to upgrade the Knowledge of students, for the approval of the Academic Council.



Chairman

**A.G & S.G.S.DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU 521165, KRISHNA Dt., A.P.
(AUTONOMOUS)**

ZOOLOGY

Semester – I

Class: I B.Sc .

PAPER-I

w.e.f. 2020-2021

Credits : 3

(Code: Zoo-101C)

Title of the paper: Biology of Non – Chordates.

Max.Marks : 70

60 hrs.(4hrs/week)

UNIT-I

10hrs.

- 1.1: Whittaker's five kingdom concept and classification of Animal Kingdom.
- 1.2 General Characters and classification of protozoa up to classes with suitable examples
- 1.3: **Phylum - Protozoa:** Type study: *Elphidium*

UNIT-II 16 hrs

Phylum Porifera

- 2.1 General characters and classification up to classes with suitable examples
- 2.2 Skelton in Sponges, Canal system in sponges

Phylum – Coelenterata

- 2.3 General characters and classification up to classes with suitable examples
- 2.4 type study: Obelia – Morphology, Structure of polyp & Medusa
- 2.5 Polymorphism in coelenterates
- 2.6 Corals and coral reefs

UNIT-III 10 hrs

Phylum Platyhelminthes

- 3.1 General characters and classification up to classes with suitable examples
- 3.2 Life cycle and pathogen city of Fasciola hepatica
- 3.3 Parasitic Adaptations in helminthes Phylum Nematelminthes
- 3.4. Life cycle and pathogen city of Ascarislumbricoides

UNIT-IV 15hrs

Phylum Annelida

- 4.1 General characters and classification up to classes with suitable examples
- 4.2 Evolution of Coelom and Coelomoducts
- 4.3 Vermiculture - Scope, significance, earthworm species, processing, Vermicompost, economic importance of vermicompost

Phylum Arthropoda

- 4.4 Vision and respiration in Arthropoda
- 4.5 Peripatus - Structure and affinities

UNIT- V

Phylum Mollusca 9 hrs

- 5.1 General characters and classification up to classes with suitable examples
- 5.2 Pearl formation in Pelecypoda
- 5.3 Water vascular system in star fish
- 5.4 Larval forms of Echinodermata

Phylum Hemichordata

- 5.5 Balanoglossus - Structure and affinities

UNIT- VI – COMPETITIVE ZOOLOGY

- 6.1: Cells-Cell Definition- Discovery of cells- Characteristics of cells- Types of cells.
- 6.2: Cell Structure-Cell Organelles and Functions. Cell Theory.
- 6.3 Defference between Prokaryotic and Eukaryotic Cells

**A.G. & S.G.Siddhartha Degree College of Arts & Science, Vuyyuru – 521165,
Krishna Dt. A.P. (Autonomous)**

Semester – I

(Model question paper)

w.e.f. 2020-2021 Title of the paper:

Biology of Non – Chordates. Code – Zoo-101C

Time: 3hrs.

max.marks: 70

.....
Section – A

Answer any **four** questions. Each question carries **five** marks.

Draw neat labeled diagrams wherever necessary.

4 x 5= 20.

- 1.Spicules in Sycon.
2. Structure of medusa in obelia.
3. Life history of Ancylostomaduodenale .
4. Coelomoducts in Annelida .
5. Significance of Vermiculture .
6. Affinities of Peripatus .
7. Structure of Balanoglossus .
8. Bipinnaria Larva.

Section – B

Answer any **five** questions. Each question carries **Ten** marks.

Draw neat labeled diagrams wherever necessary.**5 x 10 =50.**

- 9.Elphidium shows alternation of generations in its life cycle – discuss.
10. Write an account of canal system in Porifera.
11. Describe briefly the phenomenon of polymorphism in Coelenterates.
12. Describe the life history of Fasciola hepatica.
13. Describe the excretory system in leech.
14. Explain the respiratory system in prawn.
15. Explain the process of pearl formation in pelecypoda.
16. Describe the Water vascular system in Starfish.

**A.G. & S.G.Siddhartha Degree College of Arts & Science, Vuyyuru – 521165,
Krishna Dt. A.P. (Autonomous)**

Semester - I

Guide lines to the Paper Setter.

Title of the paper: Biology of Non – Chordates. Code – Zoo-101C

Time: 3hrs.

Max. Marks: 70.

1. Answer any **FOUR** questions out of eight in Section – A. Each question carries **five** marks. $4 \times 5 = 20M$.
2. Answer any **Five** questions out of eight in Section – B. Each question carries **Ten** marks. $5 \times 10 = 50M$.

	Section	UNIT-I (Protozoa)	UNIT-II Porifera- Coelenterata)	UNIT-III platyhelminthes)	UNIT-IV Annelida- Arthropoda)	UNIT-V Mollusca Echinodermata
5 Marks Questions	A	2	2	2	2	2
10 Marks Questions	B	1	2	1	2	2
Weightage		20	30	20	30	30

Note: 1. please provide the scheme of valuation for the paper.

2. Question paper should be both in English and Telugu media.

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU-521165, KRISHNA
Dt.,A.P. (AUTONOMOUS)
ZOOLOGY
PRACTICAL - I

w.e.f. 2020-2021

.Code :Zoo- 101P

MAX.MARKS : 50.

(2hrs/week)

Biology of non-chordates

1.INVERTEBRATES : Observation of the following slides/ specimens / models.

Protozoa –.Amoeba, Paramecium, Paramecium Binary fission and Conjugation, Vorticella,

Entamoebahistololytica, Plasmodium vivax

Porifera -Sycon, Spongilla, Euspongia, Sycon- T.S & L.S, Spicules, Gemmule

Coelenterata - Colony & Medusa, Aurelia, Physalia, Velella, Corallium, Gorgonia, Pennatulav

Platyhelminthes -Planaria, Fasciola hepatica, Fasciolalarval forms – Miracidium, Redia, Cercaria,
Echinococcusgranulosus, Taeniasolium, Schistosomahaematobiumvii.

Nemathelminthes - Ascaris(Male & Female), Drancunculus, Ancylostoma, Wuchereria

Annelida -Nereis, Aphrodite, Chaetopteurs, Hirudinaria, Trochophore larva

Arthropoda - : Cancer, Palaemon, Scorpion, Scolopendra, Sacculina, Limulus, Peripatus, Larvae - Nauplius,
Mysis, Zoea, Mouth parts of male &female Anopheles and Culex, Mouthparts of Housefly and Butterfly. xiii.

Mollusca - Chiton, Pila, Unio, Pteredo, Murex, Sepia, Loligo, Octopus, Nautilus, Glochidium

Echinodermata -Asterias, Ophiothrix, Echinus, Clypeaster, Cucumaria, Antedon, Bipinnaria larva

.Hemichordata- Balanoglossus, Tornaria larva.

Demonstration of dissection / dissected / Virtual Dissections.

1. Prawn - Digestive system .
2. Prawn - Appendages,
3. Prawn - Nervous system,
4. Mounting of statocyst
6. Insect Mouth Parts.

!Compulsory one species to be adopted for demonstration only by the faculty.

!Computer Aided Techniques as per U.G.C Guidelines.

!Laboratory record work shall be submitted at the time of Practical Examination.

A. G.& S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYURU-521165

EXTERNAL PRACTICAL- I

w.e.f. 2020-2021.

(Animal Diversity of Invertebrates)

(2hrs/week)

MODEL QUESTION PAPER -I Code: ZOO-101P

Time: 3 hrs.

Max.marks: 25m.

- | | |
|--|---------|
| I. Draw neat labeled diagram of Digestive system Leech. | 6M. |
| II . Draw neat labeled diagram of Radula of Pila. | 4M. |
| III. Spotters: Identify, draw labeled diagram & write notes on
A, B, C, D | 4X3=12M |
| IV. Viva. | 3M |
| TOTAL: ----- | 25M. |

Guide lines for the practical Examiners

- I. **List of dissections** : (8marks for diagram & 2 marks for labeling)

Leech/Prawn/Scorpion/Crab- Digestive system.

Prawn – Appendages.

Prawn / Scorpion /Crab- Nervous system

Pila / Unio – Digestive system.

- II.Mounting of Statocyst / Mounting of Radula. (Mounting 4 marks, labeled diagram 1 marks)

III.Spotters: 1Mark for identification, 1 Mark for labeled diagram & 3Mark for notes for each spotter.

Invertebrates: 4 specimens / slides / models.

A. G.& S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYURU-521165

INTERNAL PRACTICAL- I

w.e.f. 2020-2021.

(2 hrs/week).

(Animal Diversity of Invertebrates)Code: ZOO-101P.

MODEL QUESTION PAPER -I

Max.marks:25M.

Time: 3hrs.

- | | | | |
|----------------------------------|-------|------|------------------|
| 1. Attendance | ----- | 05M. | |
| 2. Record | ----- | 10M. | |
| 3. Field note book. | ----- | 05M | |
| 4. Project (Within the syllabus) | ----- | 05M. | Total ----- 25M. |

Reference Books :-

1. Modern Text Book of Zoology - vertebrates..... R.L.Kotpal

2. A Text Book Zoology EkambarnathAyya

SEMESTER - III

w.e.f. - 2018 – 2019.

Class: II B.Sc (B.Z.C)

Paper Code: ZOO -301C 60 Hrs (4hrs/ week)

Max.Marks: 70

Credits: 3

Title of the Paper : Cytology, Genetics and Evolution.

Unit – I 10 Hrs

1.1 Cytology - I :- Electron microscopic structure of cell .

1.2 Plasma membrane - Fluid mosaic model, Transport functions of plasma membrane (Active & Passive)

Unit – II 15 Hrs

2.1 Cell Organelles :- Structure and functions of Endoplasmic reticulum, Golgi body, Ribosome's, Lysosomes, Mitochondria.

2.2 DNA: Watson & Crick model , Semi Conservative Replication.

2.3 RNA - Structure, types & functions of RNA.

2.4 Chromosomes - Structure, types & functions, Giant Chromosomes (lamp brush & Polytene)

Unit – III 10 Hrs

3.1 Genetics-I:- Mendel's Laws of Inheritance, Incomplete dominance and co-dominance

3.2 Lethal alleles, Epistasis , Linkage and crossing over.

Unit – IV 15 Hrs

4.1 Genetics – II :- Sex determination - Genic balance theory / Bridges theory, Barr bodies.

4.2 Sex linked inheritance.

4.3 Extra chromosomal inheritance (Kappa particles in Paramecium)

4.4 Blood group inheritance.

Unit – V 10 Hrs

5.1. Evolution:- Origin of life,. Hardy -Weinberg Equilibrium, Lamarckism ,Darwinism, Neo – Darwinism

5.2 Isolation, Speciation (Allopatric and Sympatric).

Unit – VI (COMPETITIVE ZOOLOGY)

6.1: Anatomy- Types of Anatomy- Classification of Anatomy

6.2: Application of Anatomy, Application of Gross Anatomy.

6.3: Physiology- Human Physiology- Endocrine system-Hormones- Mechanisms of Hormone Action.

6.4: Nervous system- nerve Cells- Organization of Nervous System Structurally.

6.5: White Blood Cells.

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Krishna Dt. A.P. (Autonomous)

Semester - III (Model question paper)

w.e.f.2018-2019

Title of the paper: Cytology, Genetic & Evolution. Code – Zoo-301C

Time: 3hrs.

Max. Marks: 70

Section – A 4 x 5 = 20.

Answer any **Four** questions. Each question carries **Five** marks. Draw neat labeled diagrams wherever necessary.

1. Cytoplasm.
2. Fluid mosaic model.
3. Golgi body.
4. Mitochondria.
5. Crossing Over.
6. Linkage.
7. Barr bodies.
8. Hardy- Weinberg law.

Section – B

5 x 10 = 50.

Answer any **five** questions. Each question carries **Ten** marks. Draw neat labeled diagrams wherever necessary.

9. Describe the ultra structure of Eukaryotic cell?
 10. Give an account of structure and functions of Endoplasmic reticulum.
 11. Describe the structure and functions of plasma membrane.
 12. Explain the structure and types of chromosomes?
 13. Describe the Mendel's laws of Inheritance?
 14. Write an essay on Epistasis.
 15. Explain sex determination with the help of Balance theory.
 16. Write an essay on Isolation?
-

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Semester - III

**Guide lines to the Paper Setter.
Evolution**

**W.e.f. 2020-2021 Title of the paper: Cytology, Genetic &
Code – Zoo-301C**

Time: 3hrs.

Max.marks:70

Max. Marks: 75m.

1. Answer any **FOUR** questions out of eight in Section .A. Each question carries **FIVE** marks. 4x5=20m.

2. Answer any **FIVE** questions out of eight in Section – B. Each question carries **TEN** marks. 5x10= 50M.

	PART	UNIT-I (Cytology I)	UNIT-II (Cell Organelles)	UNIT-III (Genetics-I)	UNIT-IV (Genetics-II)	UNIT-V (Evolution)
5 Marks Questions	A	1	2	1	2	2
10 Marks Questions	B	1	2	1	2	2
Weightage		15	30	15	30	30

Note: 1. please provide the scheme of valuation for the paper.

2. Question paper should be both in English and Telugu media.

Reference Books :-

- 1.A Test Book of zoology: Vikram modern series: E.Chakrapani.
2. Cytology, Genetics &Ecology :P.S.Verma&V.K.Agarwal.
3. Common core –A test Book of Zoology: Sri Vikas Publication : C. Gopal.

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ZOOLOGY PRACTICAL SYLLABUS

PAPER – III

Class: II B.Sc

60 Hours/Week : 2

Credits: 2

Paper Title: Cytology, Genetics & Evolution.

Code : ZOO -301P C

Max.Marks:50

I. Cytology

1. Preparation of temporary slides of Mitotic divisions with onion root tips
2. Observation of various stages of Mitosis and Meiosis with prepared slides
3. Mounting of salivary gland chromosomes of *Chironomous*

II. Genetics

1. Study of Mendelian inheritance using suitable examples
2. Study of linkage recombination, gene mapping using the data
3. Study of human karyotypes

III. Evolution

1. Study of fossil evidences
2. Study of homology and analogy from suitable specimens and pictures
3. Phylogeny of horse with pictures
4. Darwin's finches (pictures)
5. Visit to natural history museum and submission of report

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Dt., A.P. (AUTONOMOUS)
PAPER – III
(Cytology, Genetics & Evolution)**

Model Question paper (External) Max.Marks: 25 M.

Paper Code: ZOO-301C

I. Cytology

1. Identify, draw neat labeled diagram & notes of the following stages. 2x2 ½= 5M.
A & B

II. Genetics

1. Genetics Problem. 5M.
2. Identify the following Chromosomes & Comment. 2x2 ½= 5M.
A & B

III. Evolution

1. Identify the given pictures and write the Comment. 2x2 ½= 5M
A & B
2. Identify the given pictures and Comment. 2x2 ½= 5M
A & B

**A. G. & S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYURU-521165
ZOOLOGY PRACTICAL -III
(INTERNAL)**

(2hrs/week).

(Cytology, Genetics & Evolution)

Code: ZOO-301P.

Max.marks:25M.

Time: 3hrs.

1. Attendance ----- 5M.
2. Record ----- 10M.
3. Field trip & Field note book -----10M.

Total ----- 25M.

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A.P. (AUTONOMOUS)
PAPER – III**

Guide lines for the practical Examiner

Class: II B.Z.C

Paper Title: (Cytology, Genetics & Evolution)

Max.Marks: 25 M.

w.e.f.2020-21.

Paper Code: ZOO-301C

I.Cytology

1. Slide A from Mitosis & Slide B Meiosis. $2 \times 2 \frac{1}{2} = 5M$.
($\frac{1}{2}$ mark for identification, 1 mark for labeled diagram & 1 mark for comments)

II.Genetics

2. Checker board 2M.
Explanation 3M.
3. Identify & Comment on A& B (From Chromosomes). $2 \times 2 \frac{1}{2} = 5M$
A-Identification – 1 M, Comment – $1 \frac{1}{2}$ M
B-Identification – 1 M, Comment – $1 \frac{1}{2}$ M

III.Evolution

4. Identify & Comment on A&B(A- fossil evidence, B – Homology & Analogy) $2 \times 2 \frac{1}{2} = 5M$
A-Identification – 1 M, Comment – $1 \frac{1}{2}$ M
B-Identification – 1 M, Comment – $1 \frac{1}{2}$ M
5. Identify & Comment on A& B (A- Phylogeny of Horse, B – Darwin's Finches) $2 \times 2 \frac{1}{2} = 5M$
A-Identification – 1 M, Comment – $1 \frac{1}{2}$ M
B-Identification – 1 M, Comment – $1 \frac{1}{2}$ M

(Zoology paper-V)

Class: III B.Sc (B.Z.C)

w.e.f.- 2017-2018.

Paper Code : ZOO -501C

60 Hrs. (4hrs/week) Max.Marks: 70

Title of the Paper : **Animal Biotechnology.**

Unit 1:Tools of Recombinant DNA technology - Enzymes and Vectors 15 Hrs.

- 1.1.Restriction modification systems : Types I, II and III- Nomenclature, Applications of Type II restriction enzymes in genetic engineering ,DNA polymerases, transferase, kinases and phosphatases,and DNA ligases
- 1.2 Cloning Vectors: : Properties of Cloning Vectors Plasmid vectors:pBR and pUC 18, Bacteriophage and, Cosmids.Artificial Chromosome Vectors: BACs, YACs,

Unit 2: Techniques of Recombinant DNA technology 15 Hrs

- 2.1 Cloning: Procedure of gene cloning, Use of linkers and adaptors.Microinjection, electroporation, biolisticmethod (gene gun). PCR:- Basics of PCR,Principle and Procedure of PCR.
- 2.2 DNA Sequencing: Sanger's method of DNA sequencing- traditional and automated sequencing.
- 2.3 Southern, Northern and Western blotting. DNA finger printing,

UNIT 3 Animal Cell Technology 10 Hrs.

- 3.1 Cell culture media: Natural and Synthetic, Types Cell cultures-: primary culture, secondary culture. Continuous cell lines , Established Cell lines (common examples such as MRC, HeLa,CHO, BHK,)
- 3.2 Cryopreservation of cultures, Hybridoma Technology:- Cell fusion, Production of Monoclonal antibodies (mAb), Applications of mAb
- 3.3.Stem cells: Types of stem cells- Embryonic and Adult Stem Cells, Diabetes and Parkinson's diseases.

Unit 4: Reproductive Technologies & Transgenic Animals 10 Hrs

- 4.1 Manipulation of reproduction in animals, Artificial Insemination, *In vitro* fertilization.
- 4.2 Super ovulation, Embryo transfer, Embryo cloning.
- 4.3 Transgenic Animals- Production of Transgenic Animals- sheep,fish.

Unit 5: Applied Biotechnology 10 Hrs.

- 5.1Industry: Fermentation- Different types of Fermentation. Submerged & Solid state, batch, Fed batch & Continuous (Short notes only)
- 5.2 Downstream processing - Filtration, centrifugation, chromatography, spray drying ,
- 5.3Fisheries : Polyploidy in fishes

SEMESTER-V (Model Question paper)

w.e.f.- 2017-201

Time : 3 hrs

Paper Title: Animal Biotechnology.

Paper Code : 501C

Max.Marks:70

Part – A

Answer **any FOUR** questions out of eight in Part - A . Each question carries five marks. **4 X 5 = 25**

Part – B

- 1.Ligases
- 2.YAC
- 3.Southern Blotting
- 4.DNA Fingerprinting
- 5.Applications of mAb
- 6.Polyploidy in fishes
- 7.Invivo fertilization
- 8.Chromatography

Part – B

Answer **any FIVE** questions out of eight in Part - B .Each question carries Ten marks. **5 X 10 = 50**

9. Write an essay on cloning vectors.
10. Explain the role of Type II Restriction enzymes in genetic engineering.
11. Define gene cloning .Describe the procedure of gene cloning in detail.
12. What is PCR. Briefly describe various steps of PCR.
13. Define Stem Cell Technology ? Briefly describe about it.
14. Write in detail about the transgenic animals.
15. Write an essay on different types of fermentation.
16. Briefly describe the technology of super ovulation and Embryo transfer in cattle's and discuss their applications and limitations.

SEMESTER-V

Time :3 hrs

Max.Marks:70

Guide lines to the paper setter

Paper Title : Animal Biotechnology

Paper Code : 501C

Note : 1. Answer **any FOUR** questions out of eight in Part-A . Each question carries five marks. $4 \times 5 = 20M$.

2. Answer **anyFIVE** questions out of eight in Part-B . Each question carries 10 marks. $5 \times 10 = 50M$.

	PART	Unit – I	Unit – II	Unit – III	Unit – IV	Unit – V
5 Marks Questions	A	2	2	1	1	2
10 Marks Questions	B	2	2	1	2	1
Weightage		30	30	15	25	20

- Note:**
1. Please provide the scheme of valuation for the paper.
 2. Question paper should be both in English and Telugu media.

Reference Books :-

1. Brown TA. (2010). Gene Cloning and DNA Analysis. 6th edition. Blackwell Publishing , Oxford,U.K
2. Clark DP and Pazdernik NJ. (2009). Biotechnology: Applying the Genetic Revolution. ElsevierAcademic Press, USA
3. Primrose SB and Twyman RM. (2006). Principles of Gene Manipulation and Genomics, 7th edition. Blackwell Publishing, Oxford, U.K.

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ZOOLOGY PRACTICAL SYLLABUS

PAPER - V

Periods : 30 Code: ZOO-501P
Credits : 2 Paper Title : Animal Biotechnology
Max. Marks: 50

1. Genomic DNA isolation from *E. coli*.
2. Plasmid DNA isolation (pUC 18/19) from *E. coli*.
3. Study the following techniques through photographs.
 - a. Southern blotting.
 - b. Western blotting.
 - c. DNA sequencing (Sanger's method)
 - d. DNA finger printing
4. PCR (demonstration) on site or of site demonstration.
5. Project report on animal cell culture.

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Practical - V
Animal Biotechnology
Model Question Paper (External)
Max. Marks : 25
Paper Code : ZOO-501P

-
1. Identify the following Genomic DNA isolation from *E. coli*. 5m
 2. Identify the following Plasmid DNA isolation (pUC 18/19) from *E. coli* . 5m
 3. Study the following techniques given on photographs & Write notes on. 2x5=10
A & B
 4. PCR (demonstration) on site or of site demonstration. 5m

Total: 25m

Guide lines for the Practical Examiners.

Class: III B.Z.C
Paper Title: Animal Biotechnology.
Max.Marks: 25 M.

w.e.f.2017-18

Paper Code: ZOO-501C

1. Identify the following Genomic DNA isolation from *E. coli*.
(5 marks for Procedure)
2. Identify the following Plasmid DNA isolation (pUC 18/19) from *E. coli* .
(5 marks for Procedure)
3. Study the following techniques given on photographs & Write notes on A & B.
(1 mark for identification & 4 marks for diagram and notes, for each photographs)
4. PCR (demonstration) on site or of site demonstration.
(5 marks for PCR demonstration)

Practical – V

Animal Biotechnology

Max. Marks : 25

Model Question Paper (Internal)

Paper Code : ZOO-501P

1. Attendance	--	5 M
2. Record	--	10M
3. Field trip & Field note book	--	10M
Total	--	25M

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(AUTONOMOUS)**

SEMESTER - V

(Zoology paper-VI)

Class: III B.Sc (B.Z.C)

w.e.f.-2017 -18

Paper Code : ZOO -502C

60 Hrs(6hrs/ week) External : 70Credits :3

Title of the Paper :**Animal Husbandry.**

UNIT – I :10 Hours

- 1.1 General introduction to poultry farming, Principles of poultry housing. Poultry houses.
- 1.2 Systems of poultry farming.
- 1.3 Management of chicks, growers, layers, and Broilers.

UNIT – II:

10 Hours

- 2.1. Poultry feed management – Principles of feeding. Nutrient requirements for different stages of layers and broilers.
- 2.2. Methods of feeding- Whole grain feeding system, Grain and mash method, All mash method, Pellet feeding.
- 2.3. Poultry diseases – viral, bacterial, fungal and parasitic (two each); symptoms, control and management.

UNIT – III:

10 Hours

- 3.1 Selection, care and handling of hatching eggs, Egg testing.
- 3.2 Methods of hatching.
- 3.3 Brooding and rearing, Sexing of chicks.

UNIT- IV:

20 Hours

- 4.1 Breeds of Dairy Cattle and Buffaloes – Definition of breed; Classification of Indian Cattle breeds, exotic breeds and Indian buffalo breeds.
- 4.2 Systems of inbreeding and crossbreeding.
- 4.3 Housing of dairy animals – Selection of site for dairy farm; systems of housing – loose, housing system. Conventional dairy barn

UNIT - V:

10 Hours

- 5.1 Care and management of dairy animals - Care and management of calf, heifer, milk animal, dry and pregnant animal, bulls and bullocks.
- 5.2 Cleaning and sanitation of programme. Records to be maintained in a dairy farm.

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SEMESTER-V (Model Question paper)

Time : 3 hrs Paper Code : Zoo-502C

Paper Title : Animal Husbandry

Max.Marks:70

Part – A

Answer **any FOUR** questions out of eight in Part - A . Each question carries five marks. **4 X 5 = 25**

1. Principles of poultry farming.
2. Chick management.
3. Poultry feed management .
4. Marek's disease.
5. Egg testing (Candle test)
6. Cleaning and sanitation of Dairy farm.
7. Milk record register
8. Loose housing system

Part – B

Answer **any five** questions out of eight in Part - B .Each question carries Ten marks. **5 X 10 = 50**

9. Write an essay on systems of poultry farming
10. Write an essay on management of Broilers
11. Write an essay on symptoms control and management of two viral and bacterial diseases.
12. Write an essay on methods of feeding in Poultry
13. Write an essay on different methods of hatching eggs
14. Give an account of breeds of Indian Cows
15. Explain the vaccination programme in Cattle
16. write an essay on care and management of Calf, heifer and milk animals

**A.G & S.G.S.DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU 521165, KRISHNA Dt., A.P.
(AUTONOMOUS)**

SEMESTER-V

Time :3 hrs

Max.Marks:70

Guide lines to the paper setter

Paper Title : Animal Husbandry.

Paper Code : 502C

Note : 1. Answer **any FOUR** questions out of eight in Part-A . Each question carries five marks.4 X 5 = 25M.

2. Answer **any five** questions out of eight in Part-B . Each question carries 10 marks. 5 X 10 = 50M.

	PART	Unit – I	Unit – II	Unit – III	Unit – IV	Unit – V
5 Marks Questions	A	2	2	1	2	1
10 Marks Questions	B	2	2	1	2	1
Weightage		30	30	15	30	15

- Note:**
1. Please provide the scheme of valuation for the paper.
 2. Question paper should be both in English and Telugu media.

Text Books :-

1. Animal Husbandry: ---- Technical Test paper.
2. Poultry- Technical Revised Common Core .
3. Animal Husbandry --- Dr.K.Kondaiah, A.V.N.Gupta.

ZOOLOGY PRACTICAL SYLLABUS

Period : 30

PAPER – VICredits :2

Paper Title :

Animal Husbandry Paper Code : Zoo-502P

Max.Marks:50

-
1. Study of various breeds of layers and broilers (photographs)
 2. Identification of disease causing organisms in poultry birds (as per theory)
 3. Study of the anatomy of a poultry bird by way of dissecting a bird. (Demonstration)
 4. Study of various activities in a poultry farm (layers and broilers) and submission of a report.
 5. Study of various breeds of cattle (photographs/microfilms)
 6. Study of various activities carried out in a dairy farm and submission of a report.

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Practical - VI

Animal Husbandry Max. Marks : 50

Model Question Paper (External)

Paper Code : ZOO-502P

1. Study of various breeds of layers and broilers (photographs) A & B	2X2 ¹ / ₂ =5M
2. Identification of disease causing organisms in poultry birds (as per theory) A & B	2X2 ¹ / ₂ =5M
3. Study of the anatomy of a poultry bird by way of dissecting a bird. (Demonstration)	5M
4. Study of various breeds of cattle (photographs/microfilms) A & B	2X5=10M
.	Total -- 25M

Guide lines for the Practical Examiners.Max.Marks: 25m

Class: III B.Z.C

Paper Code : ZOO-502C

Paper Title: (Animal Husbandry)

1. Identify and comment on A & B (Charts / Photographs).
(Identification - $\frac{1}{2}$ mark & Comments -2m)
2. Identify and comment on A & B (Charts / Photographs)
(Identification - $\frac{1}{2}$ mark & Comments -2m)
3. Demonstration : (4 marks for diagram & 1 marks for labeling)
4. Identify and comment on A & B (Photographs/ microfilms).
(Identification -1 mark & Comments -4m)

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Practical - V
(*Animal Husbandry*) *Max. Marks : 50*

Model Question Paper (Internal) Paper Code : ZOO-502P

1. Attendance	--	5 M
2. Record	--	10M
3. Field trip & Field note book (Any one)	--	10M

Total -- 25M

**AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS) VUYYURU- 521165**

Re-Accredited by NAAC with 'A' Grade

2020-2021



PG Department of Chemistry


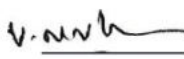
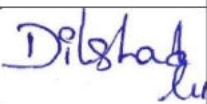

Minutes of the meeting of Board of Studies

24-11-2020

MINUTES OF BOARD OF STUDIES

Minutes of meeting of Board of studies in PG Department of Chemistry held on 24-11-2020 at 10.30 am in the PG Department of Chemistry through online (Zoom meeting)

Members Present

S.No	NAME		Signature
1	Dr. V.Sreeram Head, Dept. of Chemistry(P.G) AG & SG S College, Vuyyuru.	Chairman	
2	Prof.C.Suresh Reddy Department of Chemistry S.V. University, Tirupati.	University Nominee	
3	Prof. Koya Prabakar Rao Department of Chemistry Vignan University, Guntur.	Subject Expert	
4	Dr.M.Sivanath Associate prof. Dept. of Chemistry A.N.R.College, Gudivada.	Subject Expert	
5	Dr.G.Raja Manager(Q.A) Biophore India pharmaceuticals. Hyderabad.	Representative from Industry	
6	Abdul Raheem	One Post Graduate Meritorious Aluminous nominated by the Principal	
7	N.V.Srinivasa Rao Department of Mathematics AG & SG S College, Vuyyuru.	Representative Science Faculty Other Dept.	
8	V.N.V.Kishore Dept. of Chemistry(P.G) AG & SG S College, Vuyyuru	Member	
9	Dilshad Begum Dept. of Chemistry(P.G) AG & SG S College, Vuyyuru	Member	
10	M.Rekha Dept. of Chemistry(P.G) AG & SG S College, Vuyyuru	Member	

AGENDA:

1. To Review and modified syllabus and model question papers, discuss & approve modalities of lab courses.
2. To suggest methodologies for innovative methods of teaching
3. Any other matter with the permission of the Chair
4. Molecular Spectroscopy, Rotational Vibrational Spectroscopy, Symmetry and Group theory in chemistry in paper I semester I
5. To recommend the changed syllabus potentiometry V in semester I

Resolutions

Resolution –I

1. Resolved to recommend the framed Syllabus & Model Question Papers for theory courses of SEM III and approve the modalities of Lab Courses as prescribed by BOS members.
2. Resolved to conduct assignments etc., for Internal Assessment Tests.
3. It is resolved to change the syllabus in III, I units namely Introduction to Molecular Spectroscopy, Rotational Vibrational Spectroscopy, Symmetry and Group theory in chemistry in paper I semester I
4. It is resolved to add potentiometry in paper IV of semester I

4 Resolution –II

Resolved to adopt online teaching methods like as ZOOM, Microsoft teams, Google meet etc for ICT (Information and communication technologies) teaching

Resolution –III

5. Nil

V. G. V

M.Sc. CHEMISTRY - I - SEMESTER

CH1T1: GENERAL CHEMISTRY

Subject Code	CH1T1	I A Marks	30
No. of Lecture Hours / Week	4	End Exam Marks	70
Total Number of Lecture Hours	60	Total Marks	100
Seminar	---	Exam Hours	03

Objectives : 1. To generalize the analytical and quantitative skills gained in this course and to Apply them in more advanced course.
2. To specify the principles and applications of stoichiometry, titrimetry etc.
3. To learn problem solving and learning skills to interpret the data to employ Valid and efficient methods of analysis and to assess whether or not the Results and calculations are reasonable.

Course: General Chemistry (code CH1T1)			
S.No	COURSE OUTCOMES	PO'S	PSO's
	The student will be able to		
1	Understand the significance of statistical rules and principles in quantitative analysis.	1,2,5	2,3
2	Assimilate the knowledge of various kinds of reactions, titrations and their applications.	1,2,6	3
3	Get equipped with the basic knowledge of Methods of purification, Drying techniques and Solvent extraction.	1,2,7	1
4	Get equipped with the knowledge of Chromatography techniques like as Adsorption, Column, Paper and Thin Layer chromatography	1,2,7	3
5	Test the conceptual knowledge gained in Gas Chromatography and High-Performance Liquid Chromatography	1,2,7	3

UNIT I

Treatment of analytical data : Classification of errors - Determinate and indeterminate errors - Minimisation of errors - Accuracy and precision - Distribution of random errors - Gaussian distribution - Measures of central tendency - Measures of precision - Standard deviation - student's t test - Confidence interval of mean - Testing for significance - Comparison of two means - F - test - Criteria of rejection of an observation - propagation of errors - Significant figures and computation rules.

UNIT-II

Titrimetric Analysis: Classification of reactions in titrimetric analysis- Primary and secondary standards-Neutralisation titrations-Theory of neutralisation indicators-Mixed indicators-Neutralisation curves-Displacement titrations-Precipitation titrations-Indicators for precipitation titrations-Volhard method-Mohr method- Theory of adsorption indicators-Oxidation reduction Titrations-Change of electrode potentials during titration of Fe (II) with Ce (IV)- Detection of end point in redox titrations.

UNIT -III

Methods of purification:

Distillation: Basic principles. Distillation types, continuous distillation, batch distillation, fractional distillation, vacuum distillation and steam distillation.

Drying Techniques: Drying of Hexane, Benzene, Toluene, Xylene, Tetrahydrofuran, DMF, DMSO, Methanol, Ethanol, Diethylether and Dioxane. **Solvent extraction:** Basic principles. Different types of extraction. Selection of solvents. Avoiding emulsion formation. Basic concepts on Soxhlet extraction.

UNIT – IV

Adsorption and Partition Chromatography: Introduction to chromatography, Different types of Chromatography: **Adsorption chromatograph:** adsorbents, solvents, solutes, apparatus; **Column Chromatography:** stationary phase, Mobile phase, packing of column, advantages and disadvantages. **Paper chromatography:** Basic Principles. Ascending and descending types. Selection of mobile phase, Development of chromatograms, Visualization methods. Application of paper chromatography in the identification of sugars and amino acids. One- and two-dimensional paper chromatography; **Thin Layer chromatography:** Basic Principles. Common stationary phases, Methods of preparing TLC plates, Development of TLC plates, Visualization methods, Rf value. Application of TLC in monitoring organic reactions. identification and quantitative analysis.

UNIT V

Gas Chromatography and High-Performance Liquid Chromatography: **Gas chromatography:** Basic Principles. Different types of GC techniques. Selection of columns and carrier gases. Instrumentation. detectors; RT values. Applications in the separation, identification and quantitative analysis of organic compounds; **High Performance liquid chromatography (HPLC):** Basic Principles. Normal and reversed Phases. Selection of column and mobile phase. Instrumentation. detectors; RT values. Applications in the separation, identification and quantitative estimation of organic compounds. Concepts on HPLC method development.

REFERENCES:

1. Vogel's text book of quantitative analysis. (3rd edition)Addition Wesley Longmann Inc.
2. Quantitative analysis R.A Day and A.L.Underwood. Prentice Hall Pvt.Ltd.
3. Principles of computer programming (Fortran 77 IBM PC)V.Rajaraman, Prentice Hall.
4. An introduction to Digital computers.V.Rajaraman and T.Radhakrishnan
5. Fundamentals of Analytical Chemistry – Skoog and West
6. Instrumental Methods of analysis – B K Sharma
7. Basics of computers for Chemists, P.C. Jurs.

CH1T2: INORGANIC CHEMISTRY – I

Subject Code	CH1T2	I A Marks	30
No. of Lecture Hours / Week	4	End Exam Marks	70
Total Number of Lecture Hours	60	Total Marks	100
Seminar	----	Exam Hours	03

Objectives:

1. To impart knowledge on basic & advanced aspects of Inorganic Chemistry.
2. To specify the need of modern theories of atomic structure and chemical bonding and their applications to molecular and metallic structures and coordination chemistry.
3. To equip the students with the fundamental principles and advanced aspects of Quantum chemistry.

Course: Inorganic chemistry (code CH1T2)			
S.No	COURSE OUTCOMES	PO'S	PSO's
	The post graduate will be able to		
1	Understand the postulates, basic theory and advanced theory of Quantum chemistry.	1,2	1
2	Take up the knowledge of preparation, structure, bonding aspects and chemical properties of metal pi complexes, compounds of non – transitional elements and also spectral properties, magnetic properties and applications of Lanthanides and actinide complexes.	1,2,4	3
3	Assimilate the knowledge of non-valence cohesive forces, VSEPR theory, MO theory, MO diagrams and implications of MO theory.	1,2,7	3
4	Comprehend the bonding, structural aspects, properties and applications of complexes basing on CFT & MO theory and evidences in support of M-L bond.	1,2,3	1,3
5	Identify the significance of the thermodynamic stability of complexes, factors effecting, theories to explain stability and methods of determining the stability constant of complexes.	1,2,5	3

UNIT-I

Introduction to Exact Quantum Mechanical Results: Schrodinger equation importance of wave function, Operators, derivation of wave equation using operator concept. Discussion of solutions of Schrodinger's equation to some model systems viz. particle in one dimensional box (applications), three dimensional box, Rigid rotator system and the Hydrogen atom.

UNIT-II

Chemistry of non- transition elements - Inter halogen compounds, Halogen oxides and oxyfluorides. Noble gas compounds with special reference to clathrates. Spectral and Magnetic properties of Lanthanides and Actinides. Analytical applications of Lanthanides and Actinides.

Synthesis, properties and structure of B-N, S-N, P-N cyclic compounds and intercalation compounds.

UNIT-III

Structure and Bonding - $p\pi$ - $d\pi$ bonding - Evidences (in non-transition metal compounds). Non-valence cohesive forces, Hydrogen bonding. VSEPR theory, Walsh diagrams for linear (BeH_2) and bent (H_2O) molecules. Molecular Orbital theory, Molecular orbitals in triatomic (BeH_2) molecules and ions (NO_2^-) and energy level diagrams.

UNIT-IV

Metal –ligand bonding - Crystal Field Theory of bonding in transition metal complexes – Splitting of d-orbitals in octahedral, tetrahedral, square planar, Trigonalbipyramidal and Square pyramidal fields. Tetragonal distortions - Jahn Teller effect . Experimental evidences for covalence in complexes.

Molecular Orbital Theory of bonding for Octahedral, tetrahedral and square planar complexes. π -bonding and MOT -

UNIT-V

Metal – ligand Equilibria in solutions - Step wise and over all formation constants. Trends in stepwise constants (statistical effect and statistical ratio). Determination of formation constants by Spectrophotometric method (Job's method) and pH metric method (Bjerrum's). Stability correlations - Irwing – William's series. Hard and soft acids and bases – Hard and soft acids and bases (HSAB).

Reference Books

1. Inorganic Chemistry Huheey, Harper and Row.
2. Physical methods in inorganic chemistry, R.S. Drago. Affiliated East-West Pvt. Ltd.
3. Concise inorganic chemistry, J. D. Lee, ELBS.
4. Modern Inorganic Chemistry, W. L. Jolly, McGrawHill.
5. Inorganic Chemistry, K. F. Purcell and J. C. Kotz Holt Saunders international.
6. Concepts and methods of inorganic Chemistry, B. E. Douglas and D.H.M.C. Daniel, oxford Press.
7. Introductory quantum mechanics, A. K. Chandra
8. Quantum Chemistry, R. K. Prasad.
9. Inorganic Chemistry, Atkins, ELBS
10. Advanced Inorganic Chemistry, Cotton and Wilkinson, Wiley Eastern
11. Quantum Chemistry, R. K. Prasad.
12. Text book of Coordination Chemistry, K.SomaSekharrao and K.N.K. Vani, Kalyani Publishers.
13. Theoretical Inorganic Chemistry by G.S.Manku, Tata McGrawHill, 2000, reprint.
14. Concise co-ordination chemistry, R.Gopal, Ramalingam, Vikas Publishing, House, 2014.
15. Inorganic Chemistry – Huheey, Keuter, L.Keiter, 4th edition, Pearson education, Asia.

CH1T3: ORGANIC CHEMISTRY – I

Subject Code	CH1T3	I A Marks	30
No. of Lecture Hours / Week	4	End Exam Marks	70
Total Number of Lecture Hours	60	Total Marks	100
Seminar	----	Exam Hours	03

Objectives: 1. To provide proper insight on the topics of aromaticity and antiaromaticity in benzenoid & non-benzenoid aromatic compounds.

2. To emphasize the significance of reactive intermediates in organic synthesis.

3. To provide ample knowledge on the topic of stereochemistry and conformational analysis in order to make a student to understand organic reaction mechanisms.

Course: Organic chemistry (code CH1T3)			
S.No	COURSE OUTCOMES	PO'S	PSO's
	The post graduate will be able to		
1	Interpret the concept of aromaticity and the main properties of benzenoid and non-benzenoid aromatic compounds and distinguish between aromatic, non-aromatic and anti aromatic compounds by their structures and chemical consequence of aromaticity.	1,2,7	2,3
2	Understand the structure, stability, properties and generation of various reactive intermediates and reactive species and their role in organic reaction mechanisms.	1,2,5	1
3	Have a clear conceptual understanding of the nature of carbon-carbon multiple bond, various types of additions, with various reagents, mechanism, orientation and stereochemistry and also acknowledge some important synthetic reactions of CO and CN and crams rule.	2,6,7	2,3
4	Understand the definition types of elimination reactions and differentiate between the various mechanisms, orientation rules and perceives factors favouring elimination over substitution.	1,2,4	1
5	Have knowledge and understanding of various types of aliphatic and aromatic nucleophilic substitution reactions, their mechanisms, stereochemistry and various factors affecting nucleophilic substitution reactions	1,2,4	2

UNIT-I

Nature of Bonding in Organic Molecules: Localised and Delocalized, Delocalised chemical bonding conjugation, cross conjugation, hyper conjugation, Tautomerism.

Aromaticity: Concept of Aromaticity, Aromaticity of five membered, six membered rings

- Non benzenoid aromatic compounds: -cyclopropenylcation,

Cyclobutadienyldication, cyclopentadienylanion-tropylliumcation, cyclooctatetraenyldianion. Homoaromaticity, Anti aromaticity.

UNIT-II

Reactive intermediates:

Generation, Structure, Stability, Detection and Reactivity of Carbocations, Carbanions, Free radicals, Carbenes, Nitrenes and Arynes.

Reactive Species: Generation and reactivity of Electrophiles, Nucleophiles, Dienophiles, Ylids.

UNIT-III

Addition Reactions: Additions: Addition to carbon – carbon multiple bonds, HX, X₂, HOX, stereo chemistry of addition, formation and reaction of epoxides, syn and anti hydroxylation, hydrogenation (catalytic and Non catalytic), synthetic reactions of CO and CN and Cram's rule.

UNIT-IV

Eliminations Reactions:

Types of elimination (E₁, E₁CB, E₂) reactions, mechanisms, stereochemistry and orientation, Hofmann and Saytzeff's rules, Syn elimination versus anti elimination. Competitions between elimination and substitution. Dehydration, dehydrogenation, decarboxylative elimination, pyrolytic elimination.

UNIT-V

Substitution Reactions:

Aliphatic Nucleophilic substitutions:

The S_N2, S_N1, mixed S_N1 and S_N2 and S_Ni reactions : Mechanism, effect of structure, nucleophile, leaving group on substitutions. The neighbouring group mechanism, neighbouring group participation by σ and π bonds, anchimeric assistance.

Aromatic Nucleophilic substitution:

The S_NAr, S_N1 mechanisms and benzyne mechanism. Reactivity- effect of substrate structure, leaving group and attacking nucleophile. The Von-Richter, Sommelet – Hauser and Smiles rearrangements.

References:

1. Advanced organic chemistry – reaction, mechanism and structure, Jerry March, John Wiley.
2. Advanced organic chemistry, F.A. Carey and R.J. Sundberg, Plenum.
3. A guide book to Mechanism in organic chemistry, Peter Sykes, Longman.
4. Organic chemistry, I.L. Finar, Vol. I & II, Fifth ed. ELBS, 1975.
5. Organic chemistry, Hendrickson, Cram and Hammond (McGraw – Hill).
6. Stereo Chemistry of carbon compounds – E.L. Eliel.
7. Modern organic Reactions, H.O. House, Benjamin.

8. An introduction to chemistry of Heterocyclic compounds, R.M.Acheson.
9. Structure and mechanism in organic chemistry, C.K.Ingold, Cornell University Press.

10. Principles of organic synthesis, R.O.C.Norman and J.M.Coxon, Blakie Academic & Professional
11. Reaction Mechanism in Organic Chemistry, S.M.Mukherji and S.P.Singh, Macmillan.
12. Basic Principles of Organic Chemistry by J. B. Roberts and M. Caserio.
13. Stereo Chemistry of Organic compounds, P. S. Kalsi, New Age International.

CH1T4: PHYSICAL CHEMISTRY – I

Subject Code	CH1T4	I A Marks	30
No. of Lecture Hours / Week	4	End Exam Marks	70
Total Number of Lecture Hours	60	Total Marks	100
Seminar	----	Exam Hours	03

- Objectives:**
1. The main objective of the course is to impart the theoretical knowledge and applications of the important terms and laws of Physical Chemistry.
 2. The course provides a basic understanding of the core areas of physical chemistry based around the theme of systems, states and processes topics covered on thermodynamic, kinetics and electro Chemistry.
 4. The objective of the course is to understand and apply the laws of the thermodynamics and kinetics.

Course: Physical chemistry (code CH1T4)			
S.No	COURSE OUTCOMES	PO'S	PSO's
	The student will be able to		
1	Understand the core areas of physical chemistry based around the theme of systems, states and process covered on thermodynamics.	1,2,7	1
2	Understand the important aspects of surface phenomenon and the physical chemistry involved in it.	1,2,5	2
3	Understand the basic concepts of electrochemical cells, concentration cells in producing electricity from chemicals.	1,2,7	2
4	Understand the theories of reaction rates, mechanisms of Collision theory, primary and secondary salt effects.	1,3,7	1,3
5	Understand the method of bond length, bond strength determination, identification of functional groups present in the molecule from the microwave and IR spectra of molecules.	1,2,6	3

UNIT-I

Thermodynamics - I

Classical thermodynamics - Brief review of first and second laws of thermodynamics - Entropy change in reversible and irreversible processes - Entropy of mixing of ideal gases - Entropy and disorder – Free energy functions - Gibbs-Helmholtz equation - Maxwell partial relations - Conditions of equilibrium and spontaneity - Thermodynamic derivation of Raoult's law.

UNIT – II

Surface phenomena and phase equilibria- Surface tension - capillary action - pressure difference - across curved surface (young - Laplace equation) - Vapour pressure of small droplets (Kelvin equation) - Gibbs-Adsorption equation - BET equation - Estimation of surface area - catalytic activity of surfaces – ESCA , X-ray fluorescence and Auger electron spectroscopy.

UNIT - III

Electrochemistry – I - Electrochemical cells - Measurement of EMF - Nernst equation – Equilibrium constant from EMF Data - pH and EMF data - concentration cells with and without transference – Liquid junction potential and its determination - Activity and activity coefficients - Determination by EMF Method - Determination of solubility product from EMF measurements. Debye Huckel limiting law and its verification.

UNIT - IV

Chemical kinetics- Methods of deriving rate laws - complex reactions - Rate expressions for opposing, parallel and consecutive reactions involving unimolecular steps. Theories of reaction rates -collision theory - Steric factor - Activated complex theory - Thermodynamic aspects – Unimolecular reactions - Lindemann's theory - Lindemann-Hinshelwood theory. Reactions in solutions - Influence of solvent - Primary and secondary salt effects.

UNIT – V

Microwave Spectroscopy and Rotational Vibrational Spectroscopy: Motion of molecules- Degrees of freedom –Energy associates with the degrees of freedom Type of spectra. **Microwave spectroscopy**: Classification molecules, rigid rotator model, effect of isotopic substitution on the transition frequencies, Intensities non-rigid rotator-Microwave spectra of polyatomic molecules. **RotationalVibrational Spectroscopy**: Harmonic oscillator, vibrational energies of diatomic molecules, zero-point energy, force constant and bond strengths, anharmonicity Morse potential energy diagram. Vibration – rotation spectroscopy. PQR branches, Born–Openheimer approximation, selection rules, normal modes of vibration group frequencies, overtones, hot bands, applications.

REFERENCE BOOKS:

1. Physical chemistry, G.K.Vemulapalli (Prentice Hall of India).
2. Physical chemistry, P.W.Atkins. ELBS
3. Chemical kinetics - K.J.Laidler, McGraw Hill Pub.
4. Text book of Physical Chemistry, Samuel Glasstone, Macmillan pub.
5. Polymer Science, Gowriker,Viswanadham, Sreedhar
7. Elements of Nuclear Science, H.J.Arniker, Wiley Eastern Limited.
8. Quantitative Analysis, A.I. Vogel, Addison Wesley Longmann Inc.
9. Physical Chemistry-G.W.Castellan, Narosa Publishing House, Prentice Hall
10. Physical Chemistry, W.J.Moore, Prentice Hall
11. Polymer Chemistry – Billmeyer

CH1L1: INORGANIC CHEMISTRY PRACTICAL

Subject Code	CH1L1	I A Marks	30
No. of Practical Hours / Week	6	End Exam Marks	70
Total Number of Practical Hours	80	Total Marks	100
Seminar	----	Exam Hours	06

Course: Inorganic Chemistry Lab (code CH1L1)			
S.No	COURSE OUTCOMES	PO'S	PSO's
	The post graduate will be able to		
1	Understand the importance of Inorganic qualitative analysis and its use in research and industry.	1,2,5	2
2	Comprehend the procedures / tests for the identification of cations and anions.	1,2,6	3
3	Interpret the need for separation of interfering radical in Inorganic qualitative analysis.	1,2,3	2
4	Know that complexes can be synthesized by simple procedures.	1,2,6	2

List of experiments:

1. Preparation of Potassium trisoxalatoferate(III).
2. Preparation of Tris thiourea copper (I)sulphate.
3. Preparation of Cis and trans potassium diaquodioxalatochromium(III).
4. Preparation of Hexa ammine cobalt (III)chloride.
5. Determination of Zn^{2+} with potassium Ferrocyanide.
6. Determination of Mg^{2+} using EDTA.
7. Determination of Ni^{2+} using EDTA.
8. Determination of hardness of water using EDTA.
9. Gravimetric determination of nickel using dimethylglyoxime.
10. Gravimetric determination of Copper using ammonium thiocyanate.
11. Gravimetric determination of Zn using diammonium hydrogenphosphate.
12. Semi micro qualitative analysis of six radical mixtures

(One interfering anion and one less familiar cation for each mixture) (minimum three mixtures).

Anions: S^{2-} , SO_4^{2-} , Cl^- , Br^- , I^- , NO_3^- , SO_4^{2-} , CH_3COO^- , $C_2O_4^{2-}$, $C_4H_4O_6^{2-}$, PO_4^{3-} , CrO_4^{2-} ,

Cations: Ammonium (NH_4^+)

1st group: Hg^+ , Ag^+ , Pb^{+2} , Tl^+ , W^{+6} .

2nd group: Hg^{+2} , Pb^{+2} , Bi^{+3} , Cu^{+2} , Cd^{+2} , Sn^{+2} , Sn^{+4} , Mo^{+6} .

3rd group: Fe^{+2} , Fe^{+3} , Al^{+3} , Cr^{+3} , Ce^{+4} , Th^{+4} , Ti^{+4} , Zr^{+4} , VO^{+2} , UO_2^{+2} , Be^{+2} .

4th group: Zn^{+2} , Mn^{+2} , Co^{+2} , Ni^{+2} .

5th group: Ca^{+2} , Ba^{+2} , Sr^{+2} .

6th group: Mg^{+2} , K^+ , Li^+ .

Text books/ Reference books:

1. Vogel's Text Book of Quantitative analysis, revised. J. Bassett, R.C. Denny, G.H. Jeffery and J. Mendhan, ELBS.
2. Synthesis and Characterization of Inorganic Compounds, W.L. Jolly. PrenticeHall.
3. Practical Inorganic Chemistry by G. Pass and H. Sutcliffe Chapman and Hall.
4. Practical Inorganic Chemistry by. K. Somasekhara Rao and K.N.K. Vani. Kalyanipublishers.

CH1L2: ORGANIC CHEMISTRY PRACTICAL-I

Subject Code	CH1L2	I A Marks	30
No. of Practical Hours / Week	4	End Exam Marks	70
Total Number of Practical Hours	80	Total Marks	100
Seminar	---	Exam Hours	06

Course: Organic chemistry Lab (code CH1L2)

S.No	COURSE OUTCOMES	PO'S	PSO's
	The post graduate will be able to		
1	Understand the importance of organic compound synthesis and its use in research and industry.	1,2,6	2
2	Understand the procedures for the different steps for the organic compound synthesis.	1,5,6	2
3	Understand the mechanisms for the synthesis of organic compounds in different steps.	1,2,7	3
4	Understand the recrystallisation of organic compound in various steps for the organic compound synthesis.	1,2,4	2

List of experiments:

1. Separation of Binary mixtures of Carboxylic acid + Neutral organic compounds (Solvent extraction method).
2. Separation of Binary mixtures of Basic nature + Neutral organic compounds (Solvent extraction method).
3. Separation of Binary mixtures of Phenolic compounds + Neutral organic compounds (Solvent extraction method).
4. Preparation of Phthalimide from Phthalic anhydride – High Temperature.
5. Preparation of p-nitro acetanilide – Low temperature.
6. Preparation of Iodoform – Room temperature.
7. Column chromatography - separate the given mixture of o- and p-nitroaniline.
8. Paper chromatography - separate the given mixture of sugars or amino acids.
9. Thin layer chromatography - separate the given mixture of phenols or 2,4-DNP derivatives of carbonyl compounds.
10. Preparation of Sodium wire - to make Sodium Wire for solvent drying.
11. Preparation of Sodium Granules.
12. Preparation of Sodium t-butoxide.
13. Preparation of Grignard Reagent and its usage on a reaction.
14. Preparation of Wittig reagent.
15. Preparation of Butyl Lithium.

Text books/ Reference books:

1. A.I. Vogel, "A Text Book of Practical Organic Chemistry", Longman
2. A.I. Vogel, "Elementary Practical Organic Chemistry", Longman
3. F.G. Mann and B.C. Saunders, "Practical Organic Chemistry", Longman
4. Reaction and Synthesis in Organic Laboratory, B.S. Furniss, A.J. Hannaford, Tatchell, University Science Books millsvally.
5. Purification of Laboratory chemicals, manual, W.L.F. ArmaregoEDDPerrin
6. Reaction and Synthesis in Organic Chemistry Laboratory, Lutz-Friedjan- Tietze, TheophilEicher, University ScienceBook.

Model Question paper
A.G &S.G. Siddhartha College, Vuyyuru – 521165
PG Department of Chemistry

Sem I

Dt : XX/XX/2021

Time : 9.00 to 12.00 am

Marks : 70M

Paper – II, General Chemistry

SECTION-A

Answer all the questions. Each question carries 2 marks (10X2=20M)

All Units carries equal Marks.

1. Write equation for student's t-test and explain terms in it.
2. Explain Measure of control tendency.
3. Explain terms primary and secondary standards in titrimetric analysis.
4. Explain titration of strong acid versus strong base.
5. Explain drying techniques of Hexane, Benzene & toluene.
6. Draw apparatus for Steam distillation and Explain principle.
7. Write applications of Thin-layer chromatography.
8. Explain packing of column in adsorption chromatography.
9. Explain R_T values in HPLC and principle of HPLC.
10. Write Instrumentation diagram of Gas liquid chromatography.

SECTION-B

**Answer any 5 Questions from the following. Each Question carries 10 Marks
(5X10=50M)**

(Minimum ONE Question from Each Unit).

11. Write Brief account of Classification of Errors
12. Explain precipitation reactions and Indicators used
13. Explain Solvent extraction in brief.
14. Write basic principle of ascending and descending types of paper chromatography.
15. Explain apparatus, Mobile phase and stationary phases in column chromatography.
16. Write about basic principle, Instrumentation and working of Gas chromatography.
17. Write principles of Normal and reversed phases in HPLC and Draw Instrumentation diagram.
18. Explain Gaussian distribution and Accuracy.

Note: All units are must be covered for Questions.

Model Question paper
A.G &S.G. Siddhartha College, Vuyyuru – 521165
PG Department of Chemistry

Sem I

Dt : XX/XX/2021

Time : 9.00 to 12.00 am

Marks : 70M

Paper – II, Inorganic Chemistry

SECTION-A

Answer all questions to be answered. Each question carries 2 marks (10X2=20M)

All Units carries equal Marks.

1. Write Schrodinger's wave Equation and explain terms in it.
2. Explain Eigen values and Eigen Functions.
3. Write Classification of Interhalogen compounds
4. Write Magnetic properties of Lanthanides.
5. Write about Non- valency cohesive forces and their types.
6. Explain Inter molecular hydrogen bonding with example.
7. Draw crystal field splitting in square planar complexes.
8. What is John-Teller effect?
9. Write about Hard Acids and Soft Bases with example.
10. Explain Statistical effect.

SECTION-B

**Answer 5 Questions to be answered. Each Question carries 10 Marks (5X10=50M)
(Minimum ONE Question from Each Unit).**

11. Write Schrodinger's wave equation for particle in one dimensional box.
12. Discuss about halogen oxides and oxy fluorides.
13. I) what are the important postulates of VSPER theory.
II) Derive shapes of XeFu, XeF₂ using VSPER theory.
14. Explain splitting of d-orbital's in trigonal bipyramidal and square pyramidal crystal fields.
15. Explain step-wise and overall formation constants.
16. Explain determination of formation constant by spectrophotometric method (Job's method)
17. Explain splitting of d-orbital's in octahedral and tetrahedral complexes.
18. Explain rigid- rotator system in quantum mechanics.

**ADUSUMILLI GOPALAKRISHNAIAH & SUGAR CANE
GROWERS SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE, VUYYURU-521165, KRISHNA Dt., A.P.
(AUTONOMOUS)**

**DEPARTMENT OF COMMERCE(PG)
M.Com**

2020-2021



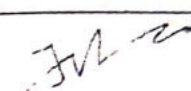
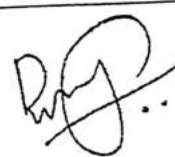
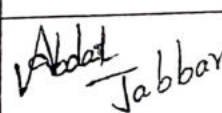
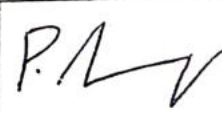

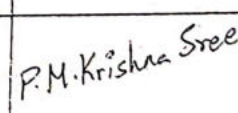
BOARD OF STUDIES

Minutes of Meeting

30-11-2020

DEPARTMENT OF COMMERCE (PG)

Minutes of the Board of Studies Meeting (Online) of Department of Commerce for M.Com held on 30/11/2020 at 11 AM. The following members were present.

Members Present		
Name of the Member	Role	Signature
Dr. T.Venkateswara Rao HOD PG Department of Commerce Mobile : 9848726150/9491737921	Chairman	
Dr. R. Padmaja, Assistant Professor in Business Management, Krishna University, Machilipatnam. Mobile: 9440532444,	University Nominee	
Dr. R. Siva Ram Prasad Professor, Dean, Department of Commerce & Business Administration , Acharya Nagarjuna University, Nagarjuna Nagar. Mobile : 98498 56589	Subject Expert	
Sri V.V. Punna Rao General Manager KCP Sugars Pvt. Ltd., Vuyyuru Mobile : 97044 56972	Industry Expert	V V. Punna Rao
Prof. Rajesh C Jampala Dean Department of Commerce and Business Management PBS COLLEGE OF ARTS AND SCIENCE VIJAYAWADA Mobile : 98668 06069	Subject Expert	
Abdul Jabbar Vuyyuru Mobile : 70958 77869	One Post Graduate Meritorious Aluminous nominated by the Principal	
Smt. P. Soumya Dept. of Commerce(P.G) AG & SG S College, Vuyyuru	Member	
Miss V. Anitha Dept. of Commerce (P.G) AG & SG S College, Vuyyuru	Member	
Miss P. Mohana Krishnasri Dept. of Commerce (P.G) AG & SG S College, Vuyyuru	Member	

Agenda for B.O.S Meeting

1. To recommend syllabi for 1st and 2nd semesters of 1st M.com. Course for the Academic Year 2020-2021.
2. To recommend the Model Question Papers and guidelines of 1st and 2nd semesters of First M.com. For the Academic Year 2020-2021.
3. To recommend the guidelines to be followed by the Question Paper setters in 1st M.com for the-1st-and-2nd-semester- end exams.
4. To recommend the teaching and evaluation methods to be followed under Autonomous status.
5. Any suggestions regarding Seminars, Workshops, Guest lectures and research work to be organized.
6. Recommend the panel of paper setters and examiners to the controller of Examination of Autonomous courses of AG & SG Siddhartha degree college of Arts and Science College, Vuyyuru.
7. Any other matter.

RESOLUTIONS

1. Discussed and recommended the syllabi of 1st and 2nd semester of 1st M.com. For the approval of the Academic Council.
2. Discussed and recommended the model question papers of 1st and 2nd semesters of First M.com, for the approval of the Academic Council.
3. Discussed and recommended the guidelines to be followed by the question paper setter of 1st M.com for 1st and 2nd semester's .For the approval of the Academic Council.
4. Discussed and recommended the following teaching and evaluation methods for approval of Academic Council.

Teaching methods:

- Besides the conventional methods of teaching, we use modern technology i.e. using of LCD projector to display on U boards and online teaching etc., for better understanding of concept.

Evaluation of student is done by the following procedure:

Internal Assessment Examinations:

- i) Out of maximum 100 marks in each paper, 30 marks shall be allocated for internal assessment.
- ii) Out of these 30 marks, 20 marks are allocated for announced internal tests. Four announced internal tests will be conducted and average of these Four tests shall be deemed as the marks obtained by the students, out of 10 marks 5 marks are allocated to assignments and seminars and remaining 5 marks are allocated to candidate's percentage of attendance.

Semester-End Examinations:

- i) The maximum marks for Semester-End Examinations shall be 70 marks and duration of the examination shall be 3 Hours.
 - ii) Semester-End Examinations shall be conducted in theory papers at the end of every semester.
5. Discussed and recommended for organizing Seminars, Guest lectures, Work-shops to upgrade the knowledge of students, for the approval of the Academic Council.
 6. Discussed and empowered the H.O.D to suggest the panel of paper setters and Examiners to the Controller of Examinations.
 7. Nil.



Chairman.

AG & SG Siddhartha Degree College of Arts & Science (Autonomous), Vuyyuru – 521 165.

(An autonomous college in the jurisdiction of Krishna University, Machilipatnam)

M.COM SEMESTER – I

SYLLABUS

CO101: MANAGEMENT THEORY AND PRACTICE

Unit–I: Introduction: Management, Concept, Significance, Levels, Skills, Functions and Principles - Management as an Art, Science and Profession – Social responsibilities of business.

Unit–II: Planning: Nature, Purpose, Process of Planning, Types of Plans – Premising & Forecasting, Decision Making: Concept, Process, Management By Objectives: Concepts, Process. Advantages and Limitations.

Unit–III: Organizing: Process - Formal and Informal Organizations -Departmentation: Methods of departmentation, Span of Control; V.A. Graicuna’s Theory - Factors Determining Span of Control - Delegation: Concept, Process, Advantages and Principles of Effective Delegation; Decentralization: Factors, Advantages and Disadvantages. Line and Staff: Concept- Reasons for Conflicts between Line and Staff and Measures to Overcome; Committees, Types of Committees.

Unit–IV: Staffing: Nature and Importance of Staffing, Elements of Staffing. Directing: Meaning, Assumptions of Human Behavior by Douglas McGregor, Edgar Shien and Elton Mayo.

Unit–V: Motivation: Significance, Process-Theories of Maslow, Herzberg, Porter and Lawler; Leadership: Trait Approach, Leadership Styles, Managerial Grid; Likert’s Four Systems of Leadership- Communication: Importance, Process, Barriers, Measures to overcome Barriers of an Effective Communication. Controlling: Basis - Control Process, Requirements of adequate Control - Techniques of control, PERT and CPM

Suggested Books:

- Heinz Wihrich., H.Koontz and Markv Cannice, *Management*, 13ed. 2010, Tata McGraw, New Delhi
- Prasad L.M, Principles and Practice of Management, Edition2019, Sultan Chand and Sons, New Delhi.
- Rama Swamy T, Principles of Management. First Ed.,2014, Himalaya Publishing House, Mumbai.

Stoner, J. *Management*, 6th ed., 1995, Pearson Education, New Delhi

M.COM. DEGREE EXAMINATIONS - First Semester

MANAGEMENT THEORY AND PRACTICE

QUESTION PAPER

Duration: 3 hours

MODEL QUESTION PAPER

Maximum Marks: 70

SECTION- A

1. Answer All Questions

5×4=20 Marks

i. a) Concept of management

OR

b) Skills of management

ii. a) Explain the purpose of Planning

OR

b) Distinguish between the concepts Delegation and Decentralization.

iii. a) Classify the types of Committees.

OR

b) Define Departmentation.

iv. a) Define Staffing.

OR

b) Explain Executive Development Programme

v. a) Show the list of Leadership Traits.

OR

b) Define PERT AND CPM.

SECTION – B

Answer All Questions

5×8=40Marks

2. a) Explain the Nature and significance of Management.

(Or)

b) Discuss the functions of Management.

3. a) Define MBO. Explain the steps in MBO process.

(Or)

b) Describe steps in the process of Planning.

4. a) Examine the methods of Departmentation with merit and limitations of each.

(Or)

b) Define Span of Management. Analyze determining factors that influence span of management.

5. a) Identify the nature and elements of staffing.

(Or)

b) Distinguish between theory X and theory Y proposed by McGregor.

6. a) Examine the motivation theory of Need Hierarchy.

(Or)

b) Define Leadership. Categorize the Styles of leadership

SECTION - C

Answer the following question.

(1 x 10=10 marks)

7. a) Define Management. Explain the 14 principles of management as given by Henry Fayol.

(Or)

b) Define Communication. Analyze various barriers to effective communication. Suggest Measures to make communication more effective

The Guidelines to be followed by the question paper setters in **MANAGEMENT THEORY AND PRACTICE** for the first semester-end exams

PAPER TITLE: MANAGEMENT THEORY AND PRACTICE

PAPER-1

Semester-1

Maximum Marks: 70

Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters

Subject Name: Management Theory and Practice	Course: M.Com.	Course Code: CO111	Department: Commerce (PG)
1. Dr.Md.S.Rahaman Associate Professor, Department of Commerce & Business Administration, P.B Siddhartha College of Arts & Science Vijayawada. Mobile No. : 9866965767.	2. Dr. S.Srinivasa Rao, Assistant Professor, Department of Commerce, T.J.P.S.College, Guntur. Mobile No.: 9440887484.		

M.COM SEMESTER – I
SYLLABUS

CO102: BUSINESS ECONOMICS

Unit-I: Introduction – Definition, Nature and Scope of Managerial Economics; Economic Goals of a Business Firm: Profit Maximization Vs Wealth Maximization, Sales Revenue Maximization.

Unit-II: Consumer Equilibrium under Cardinal and Ordinal Utility - Demand Analysis – Law of Demand – Demand Function and determinants of Market Demand – Concept of Price, Cross, Income and Promotional Elasticity; their measurement and relevance in Managerial Decision – Making Methods of Demand Forecasting.

Unit-III: Firm’s Equilibrium – Iso-quant and Iso-cost analysis; Least – Cost Combination of inputs – The law of Diminishing Marginal Returns in Production – Production Function – Total Product, Marginal and Average Product Curves, their inter – relationships – Cobb – Douglas Production Function and its relevance - Scale and proportion, Cost Functions – Derivation of total, marginal and average cost functions – Long run cost curves

Unit-IV: Market Structures and their characteristics – Pricing and output Decisions of firm under different Market structures – Perfect Competition, Pure Monopoly, Oligopoly, Monopolistic / Imperfect Competition under short and long runs. Discriminative Monopoly Regulation of Monopoly through Prices and Taxes.

Unit-V: Pricing Practices of Firms – Objectives of Pricing Policy – Approaches to Pricing New Products; Skimming Price, Penetration Pricing, Costs Plus Pricing, Managerial Cost Pricing, Psychological Pricing, Odd Number Pricing, Regulated Pricing, Predatory Pricing

Suggested Books:

- Gauvray Datt and Ashwani Mahajan, Indian Economy. 5th Ed, 2015, S Chand and Co, New Delhi.
- Mithani DM, Managerial Economics-Theory and Applications,5th Ed,2010,Himalaya publishing house ,Mumbai.
- Thomas R, Christopher Charles, Maurice, “Managerial Economics: Concepts and .Applications”, 4th 2012, Tata McGraw-Hill, New Delhi..
- Sudip Chaudhuri, Anindya Sen, Economics,19th Ed,2016,Tata Mc Grail Education Pvt Ltd, New Delhi

MODEL QUESTION PAPER
M.COM. DEGREE EXAMINATIONS
First Semester
BUSINESS ECONOMICS

Duration: 3 hours

Maximum Marks: 70

SECTION- A

1. Answer All Questions

5×4=20 Marks

i. a) Define Wealth maximization

OR

b) Distinguish Business Economics from Managerial Economics.

ii. a) Explain Demand function

OR

b) Explain Consumer Equilibrium

iii. a) What is Marginal cost

OR

b) Explain Cobb-Douglas production function.

iv. a) Define Perfect competition.

OR

b) Define Oligopoly.

v. a) Explain Penetration Pricing.

OR

b) Analyse Good value strategy.

SECTION – B

Answer All Questions

5×8=40Marks

2. a) Define Business economics? Discuss its nature and scope?

(OR)

b) What are the economic goals of a firm?

3. a) What is the meaning of Demand? What are the determinants of market demand?

(OR)

b) Explain about the income elasticity of demand with some examples?

4. a) Examine the firm's equilibrium using ISOCOST and ISOQUANT Analysis?
(OR)
b) Explain the managerial uses of cost concepts?
5. a) Distinguish between perfect competition and monopolistic competition?
(OR)
b) Explain the features of oligopoly?
6. a) Examine briefly about objectives of pricing policy?
(OR)
b) Outline in detail about cost plus pricing and managerial cost pricing?

SECTION C - (1 x 10=10 marks)

Answer the following question.

7. a) Discuss how price determined under perfect competitive market?
(OR)
b) Explain the cost output relationships both in short-run and long-run?

The Guidelines to be followed by the question paper setters in BUSINESS ECONOMICS for the first semester-end exams

PAPER TITLE: BUSINESS ECONOMICS

PAPER-2

Semester-1

Maximum Marks: 70

Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters

Subject Name: Business
Economics

Course: M.Com

Course Code: CO112

Department:Commerce (PG)

1. Dr.J.Durga Prasad
Associate Professor,
Department of Commerce & Business
Administration,
P.B Siddhartha College of Arts & Science,
Vijayawada.
Mobile No. 9848515628.

2. Dr. K.Sivaji,
Assistant Professor,
Department of Commerce & Business &
Administration,
T.J.P.S.College,
Guntur.
Mobile No.: 9440520219.

M.COM SEMESTER – I
SYLLABUS

CO103: BUSINESS ENVIRONMENT

Unit-I: Business Environment: Components and Significance - Nature of Business Environment - Techniques of Environmental Scanning and Monitoring – **Economic Scope – Cultural, Political, Technological and External Factors Influencing Business Environment – Challenges- Economic systems.**

Unit-II: Economic Environment of Business: Significance for Business – Economic Planning – Objectives and Achievements; Government policies – Industrial policy of 1991; Fiscal policy; **Economic Reforms and LPG**

Unit-III: Political and Legal Environment of Business: Political Institutions – Legislature, Executive and Judiciary – Changing Dimensions of Legal Environment in India; **Patents Act-1970, SICA-1985, SEZ Act-2005.**

Unit-IV: Cultural and Technological Environment: Elements of Socio – Cultural Environment; Impact on Business – Social Audit - Technological Environment in India; Technology Transfer – Technology Policy.

Unit -V: International and Recent Issues in Environment: Multinational Corporations; Foreign Collaborations and Indian Business; International Economic Institutions: **WTO, World Bank, IMF and their importance to India;** Foreign Trade Policies.

Suggested Books

1. Francis Cherunilam, *Business Environment*, 25th revised edition 2017, Himalaya Publishing House, Mumbai.
2. Fernando, A.C., *Business Environment*, 1st edition 2011, Pearson, Delhi.
3. Suresh Bedi, *Business Environment*, 1st edition 2005, Excel Books, New Delhi,
4. Adhikary.M. *Economic Environment of Business*, 2004, Sultan Chand & Sons, New Delhi.
5. Aswathappa.K. *Essentials of Business Environment*, 12th revised edition 2014, Himalaya Publishing, Delhi.
6. Justin Paul, *Business Environment*, Text and Cases, 12th edition 2018, Tata McGraw Hill.
7. H.L.Ahuja, “*Economic Environment of Business*”, 13th edition 2016, S.Chand, New Delhi.

MODEL QUESTION PAPER
M.COM. DEGREE EXAMINATIONS
First Semester
BUSINESS ENVIRONMENT

Duration: 3 hours

Maximum Marks: 70

SECTION- A

1. Answer All Questions

5×4=20 Marks

- i. a) Define Concept of Environment (CO1)(L1)
OR
b) Explain Business Environment Scanning (CO1)(L2)
- ii. a) Examine the Significance of Economic Environment of Business(CO2) (L4)
OR
b) Define LPG (CO2) (L1)
- iii. a) Define Political Institutions (CO3) (L1)
OR
b) Define Legal Environment in India (CO3) (L1)
- iv. a) Define Cultural Environment (CO4) (L1)
OR
b) Define Technological Policy (CO4) (L1)
- v. a) Define Foreign Collaboration(CO5) (L1)
OR
b) Define WTO(CO5) (L1)

SECTION – B

Answer All Questions

5×8=40Marks

2. (a) Define Business Environment? Explain the nature and significance of Business Environment? (CO1) (L1)
(OR)
(b) Explain various techniques of environmental scanning? (CO1) (L2)
3. (a) What is economic planning? Explain the objectives of present economic plan? (CO2) (L1)
(OR)
(b) Critically examine the new industrial policy resolutions? (CO2) (L4)

4. (a) Define the political institutions? Explain the role of Government towards Business. (CO3) (L1) (L2)

(OR)

(b) Identify the role of SEZ act 2005 in the present context? (CO3) (L3)

5. (a) Explain the elements of socio-cultural elements? (CO4) (L2)

(OR)

(b) Discuss the importance of technological environment in India? (CO4) (L6)

6. (a) Define MNC? Explain the scope and importance of MNC? (CO5) (L1)(L2)

(OR)

(b) Determine the role of IMF in India? (CO5) (L5)

SECTION - C

Answer the following question.

(1 x 10=10 marks)

7. (a) Define privatization? Explain the merits and demerits of privatization? (CO3)(L1)(L2)

(OR)

(b) Why WTO replaced GATT - Impact of Regional Trading Agreement on WTO?

(CO5) (L1)

The Guidelines to be followed by the question paper setters in BUSINESS ENVIRONMENT for the first semester-end exams

PAPER TITLE: BUSINESS ENVIRONMENT

PAPER-3 Semester-1 Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters

Subject Name: Business Environment	Course: M.Com	Course Code: CO113	Department:Commerce (PG)
1. Mrs.B.Kalpana Assistant Professor Department of Commerce & Business Administration, P.B Siddhartha College of Arts & Science Vijayawada. Mobile No. 7842669134.		2. Dr.J.Pratap Reddy, Professor, Dept.of Commerce, T.J.P.S.College, Guntur, Mobile: 9440542609.	

M.COM SEMESTER – I
SYLLABUS

CO104: ENTREPRENEURSHIP DEVELOPMENT

UNIT-I:

Entrepreneur: Evolution, Characteristics, Types, Functions of Entrepreneur - Factors influencing entrepreneurship - Barriers to entrepreneurship - Growth of Entrepreneurship in India -Women entrepreneurship in India - Role of Entrepreneurship in Economic Development

UNIT-II:

Idea Generation and Opportunity Assessment: Importance of Ideas in Entrepreneurship - Sources of New Ideas – Techniques for generating ideas- Steps in assessing business potential of an idea- Opportunity Recognition- sources and process- Steps in tapping opportunity.

UNIT-III:

Financing Of Enterprises: Need for Financial Planning- Sources of finance, Capital Structure, Term-loan, - Sources of Short-Term Finance, Venture capital, Export Finance,- Institutional Finance To Entrepreneurs, - Preparation of Business Plans.

UNIT-IV:

Institution support in small business enterprises: Introduction – central level institutions- KVIC;SIDO;NSIC ltd; National Productivity Council (NPC); EDII – State level institutions –DIC-SFC-SSIDC-Industry Associations- CII;FICCI;ASSOCHAM.

UNIT-V:

Government Policy and Taxation Benefits : Government Policy for SSIs- Need for tax benefits-Tax Holiday; Rehabilitation allowance ; Investment allowance ; Tax concessions for SSIs in rural and Rural and backward areas.

TEXT BOOKS

1. Osterwalder, Alexander and Yves Pigneur; “Business Model Generation”, John Wiley & Sons, New Jersey, 2012.
2. Roy Rajeev, “Entrepreneurship“ Oxford Latest Edition, 2008

REFERENCE

1. Arya Kumar, Entrepreneurship, 1st Edition, Pearson, Delhi, 2012.
2. Poornima M. Ch., Entrepreneurship Development- Small Business Enterprises, 1st Edition, Pearson, Delhi, 2009
3. Afuah, Allan; “Business Models: A Strategic Management Approach”, 1st Edition, McGraw-Hill, New York, 2004.
4. E. Gordon & K. Natarajan “Entrepreneurship Development” 6th Revised Edition, Himalaya Publishing house, 2008,

AG & SG Siddhartha Degree College of Arts & Science (Autonomous), Vuyyuru – 521 165.
(An autonomous college in the jurisdiction of Krishna University, Machilipatnam)

MODEL QUESTION PAPER
M.COM. DEGREE EXAMINATIONS
First Semester
ENTREPRENEURSHIP DEVELOPMENT

Duration: 3 hours

Maximum Marks: 70

SECTION- A

1. Answer All Questions

5×4=20 Marks

i. a) Distinguish Entrepreneurship Vs. Intrapreneurship.

OR

b) Define an Entrepreneur

ii. a) Define the source of Ideas.

OR

b) Business Development

iii. a) What do you mean by Working Capital Management ?

OR

b) Project appraisal

iv. a) KVIC

OR

b) CII

v. a) Meaning of SSIs or

OR

b) Explain Tax Holiday

SECTION – B

Answer All Questions

5×8=40Marks

2. a) Explain the importance of entrepreneurship in economic development.

(Or)

b) Elaborate the role of women entrepreneurship in India.

3. a) What are the steps in assessing business potential of an idea?

(Or)

b) Explain the importance of ideas in entrepreneurship.

4. a) What is meant by Venture Capital? Explain the relevance of Venture Capital finance in Economic Development.

(Or)

b) Discover the role of institutional finance in entrepreneurship development.

5. a) Examine the role of SFC in supporting small business enterprises in India.

(Or)

b) Evaluate the role of SFC in supporting small business enterprises

6. a) Critically examine the policy of the Govt. towards SSIs.

(Or)

b)What are the tax concessions available to SSIs in rural and backward areas?.

SECTION - C

Answer the following question.

(1 x 10=10 marks)

7. a) What are the guidelines observed for project report preparation?

(Or)

a) Distinguish between management and entrepreneurship.

The Guidelines to be followed by the question paper setters in ENTREPRENEURSHIP DEVELOPMENT for the first semester-end exams

PAPER TITLE: ENTREPRENEURSHIP DEVELOPMENT

PAPER-4 Semester-1 Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters & External Examiners

Subject Name: Entrepreneurship Development	Course: M.Com	Course Code: CO114	Department:Commerce (PG)
1. Mrs.G.Lalitha Madhavi Assistant Professor Department of Commerce & Business Administration P.B Siddhartha College of Arts & Science Vijayawada. Mobile No.: 7799209460		2. Dr. S.Srinivasa Rao, Assistant Professor, Department of Commerce, T.J.P.S.College, Guntur. Mobile No.: 9440887484.	

M.COM SEMESTER – I
SYLLABUS

CO105: INFORMATION TECHNOLOGY FOR BUSINESS

Unit-I: Information Technology (IT) in Business Environment: Business in the Information Age - Pressures and Responses, Why do we need to know about Information Technology, What is an Information System, Capabilities of Information Systems - Basic concepts of Information Systems, organizations - Structures and IT support - IT support at different organizational levels, Managing IT in organizations

Unit-II: IT Infrastructure: Computer Hardware - Input Technologies, Output Technologies - Computer Software - Types of software, general functions of Operating system, Types of application software - Managing organizational Data and Information - Basics of Data arrangement and Access, Traditional file Environment. Databases: Modern Approach, Database Management Systems - Logical Data Models, Data Warehouse. Telecommunications systems and Networks - Network communications software, Internet: Services provided by Internet, World Wide Web, Intranets and Extranets.

Unit-III: Information Systems to Support Business Functions: Transaction Processing Systems, Accounting and Finance Systems, Production Management Systems, Human Resources Management Systems, Integrated Information Systems and Enterprise Resource Planning, Inter-organizational/Global Information Systems. Electronic Commerce - Types, Benefits of E- Commerce, Infrastructure and E-commerce support, Legal and ethical issues in E-commerce. Computer-based Supply chain management and IS Integration: IT supply chain support and systems Integration: Enterprise Resource Planning.

Unit-IV: Data, Knowledge and Decision Support: Decision making and Decision support systems, Enterprise Decision support, Knowledge Management and Organizational Knowledge bases. Intelligent systems in Business: Expert systems, Intelligent Agents.

Unit-V: Strategic Advantage and Information Technology: Strategic Organizations in the Information Age, Business Process Re-engineering, Virtual corporations and Information Technology - Implementing IT: Ethics, Impacts and Society, Ethical Issues, Impact of IT on Organizations and Jobs, on Individuals at Work, Societal Impact and Internet Communities, Protecting Information Systems.

Reference Books:

1. V. Rajaraman- Introduction to Information Technology 2nd Edition (2013), PHI
2. Turban/Rainer/Potter- Introduction to Information Technology, 3rd Edition Willey.
3. Alexis Leon, Mathew Leon, Fundamentals of Information Technology, 2nd Edition (2015) LeonVikas.
4. Turban/Volonino/Wood/O.P. Wali - Information Technology for Management,(2015).

MODEL QUESTION PAPER
M.COM. DEGREE EXAMINATIONS
First Semester
INFORMATION TECHNOLOGY FOR BUSINESS

Duration: 3 hours

Maximum Marks: 70

SECTION- A

1. Answer All Questions

5×4=20 Marks

- i. a) What are the differences between Information Technology and Information Systems?

OR

- b) What are the capabilities of information system?

- ii. a) What are the various input devices of the computers?

OR

- b) What are the differences between intranet and extranet

- iii. a) Distinguish integrated information systems

OR

- b) What is a human resource management systems

- iv. a) What are the differences between decision making and decision support systems

OR

- b) Explain knowledge management bases

- v. a) Explain internet communities.

OR

- b) What do you mean by business process re-engineering?

SECTION – B

Answer All Questions

5×8=40Marks

2. a) What is an Information system. Explain the capabilities of Information systems

(OR)

- b) Explain about Information Technology in organizations.

3. a) What is an operating system. Explain the general functions of operating systems.

(OR)

- b) What are the differences between File based approach and Database Approach.

4. a) Explain the types and benefits of E-commerce.

(OR)

b) Explain briefly about computer based supply chain management.

5. a) Explain briefly about the features, benefits and limitations of expert systems.

(OR)

b) Explain intelligent agents and how they are used in today business.

6. a) Explain how Information Technology is implemented in organization and its impact on society.

(OR)

b) What are the ethical issues involved in implementing Information Technology.

SECTION - C

Answer the following question.

(1 x 10=10 marks)

7. a) What is DBMS. Explain the architecture and benefits of this system

(OR)

b) Explain the societal impacts of Information Technology and different ways of protecting Information Systems

The Guidelines to be followed by the question paper setters in INFORMATION TECHNOLOGY FOR BUSINESS for the first semester-end exams

PAPER TITLE: INFORMATION TECHNOLOGY FOR BUSINESS

PAPER-5 Semester-1 Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters & External Examiners

Subject Name: Information Technology For Business	Course: M.Com	Course Code: CO115	Department:Commerce (PG)
1. Mrs.K.Sirisha, Lecturer, Department of Commerce & Business Administration, P.B Siddhartha College of Arts & Science Vijayawada. Mobile No.: 7032617871	2. Dr. K.Sivaji, Assistant Professor, Department of Commerce & Business & Administration, T.J.P.S.College, Guntur. Mobile No.: 9440520219		

AG & SG Siddhartha Degree College of Arts & Science (Autonomous), Vuyyuru – 521 165.
(An autonomous college in the jurisdiction of Krishna University, Machilipatnam)

M.COM SEMESTER – I
SYLLABUS

CO106: QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS

UNIT-I: Matrices, Differentiation, Permutations and combinations: Matrices –Basic concepts, Solving system of equations with Cramer’s rule and Inverse method - Differentiation and integration of simple functions and their applications- Permutations and Combinations.

UNIT-II: Correlation and Regression: Correlation: Types of Correlation - Simple and Rank Correlation coefficient in the case of two variables- **Regression: Meaning and importance of Regression Analysis.** Estimation of Lines of Regression in the case of two variables.

UNIT-III: Probability: Concept of Probability: Definitions of Probability, Addition Theorem of Probability, Conditional Probability and Multiplication theorems of Probability, Baye’s Theorem of Probability and its **Applications.**

UNIT- IV: Theoretical distributions: Binomial Distribution, Poisson distribution and Normal distribution – their **Properties and Applications.**

UNIT-V: Testing of Hypothesis: Concept of Testing of Hypothesis, Types of Errors, Standard deviations and Proportions, Z- test for Means, T-test, F-test for two variances and Chi-Square test for goodness of fit and independent of Attributes and their Applications – Confidence intervals.

Suggested Books:

1. S.C. Gupta.-, Fundamentals of Statistics, 7th Revised Edition (2013) Himalaya Publishing House, New Delhi..
2. Sharma, J.K.-, Fundamentals of Business Statistics, 2nd Edition (2000) Pearson Education, New Delhi..
3. Sancheti, Dc & V.K Kapoor, Business Mathematics, 3rd Edition (2014) Sultan Chand & Sons, New Delhi..
4. Arora, P. N., S. Arora- Comprehensive Statistical Methods, 2nd Edition (2007) S. Chand, New Delhi.
5. Sharma, J.K., Quantitative Methods- Theory & Applications, 3rd Edition (2010) Macmillan New Delhi.\

MODEL QUESTION PAPER
M.COM. DEGREE EXAMINATIONS - First Semester
QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS

Duration: 3 hours

Maximum Marks: 70

SECTION- A

1. Answer All Questions

5×4=20 Marks

i. a) Explain permutations and combinations.

OR

b) Distinguish Differentiation from Integration

ii. a) What is correlation and explain different types of correlation?

OR

b) What are the properties of regression coefficients?

iii. a) State Addition Theorem of Probability

OR

b) Define i) Exhaustive events ii) Equally likely events

iv. a) What is the importance of Poisson distribution?

OR

b) What are the properties of Binomial Distribution

v. a) Distinguish between Type-I and Type-II errors

OR

b) Explain the procedure for testing of hypothesis

SECTION – B

Answer All Questions

5×8=40Marks

2.a) Solve the following Simultaneous Linear Equations by using Cramer's Rule

$$2x+y-Z=3; x+y+z=1; x-2y-3Z=4$$

OR

b)A company has examined its cost structure and revenue structure and has determined that C the total cost, R total revenue, and x the number of units produced are related as: $C=100+0.015x^2$ and $R=3x$ Find the production rate x that will maximize profits of the company. Find that profit. Find also the profit when $x=120$.

3. a) Find the Karl Pearson's Coefficient of Correlation from the following data:

Marks in Economics	45	55	56	58	60	65	68	70	75	80	85
Marks in Statistics	56	50	48	60	62	64	65	70	74	82	90

OR

b) The following data about the sale and advertisement expenditure of a firm is given below.

	Sales(in Crores of Rupees)	Advertisement Expenditure(in Crores of Rs)
Means	40	6
Standard Deviation	10	1.5

Coefficient of Correlation $=r=0.9$

- I. Estimate the likely sales for a proposed advertisement expenditure of Rs. 10 Crores.
- II. What should be the advertisement expenditure if the firm proposes a sales target of 60 Crores of Rupees?

4. a) i) A box contains 6 red, 4 white and 5 blue balls. From this box 3 balls are drawn in succession. Find the probability that they are drawn in the order red, white and blue if each ball is i) replaced ii) not replaced

OR

b) The contents of urns I, II and III are as follows:

1 white, 2 black and 3 red balls,

2 white, 1 black and 1 red balls, and

4 white, 5 black and 3 red balls

One urn is chosen at random and two balls drawn. They happen to be white and red. What is the probability that they came from urns I, II or III?

5.a) What is Normal Distribution? Explain characteristics and importance of the normal distribution.

OR

b) If 5% of the electric bulbs manufactured by a company are defective, use Poisson distribution to find the probability that in a sample of 100 bulbs (i) none is defective, (ii) 5 bulbs will be defective. (Given $e^{-5}=0.007$)

6. a) In a sample of 400 parts manufactured by a factory, the number of defective parts was found to be 30. The company, however, claimed that only 5% of their product is defective. Is the claim tenable?

OR

b) Two types of batteries are tested for their length of life and the following data are obtained:

	No. of Samples	Mean life in Hours	Variance
Type A:	9	600	121
Type B:	8	640	144

Is there a significance difference in the two means? (Table value=2.131)

SECTION - C

Answer the following question.

(1 x 10=10 marks)

7.a) From the following data, use χ^2 -test and conclude whether inoculation is effective in preventing tuberculosis:

	Attacked	Not attacked	Total
Inoculated	31	469	500
Not inoculated	185	1,315	1,500
Total	216	1,784	2,000

OR

b) In order to make a survey of the buying habits, two markets A and B are chosen at two different parts of a city. 400 women shoppers are chosen at random in market A. Their average weekly expenditure on food is found to be Rs.250 with a standard deviation of Rs.40. The figures are Rs.220 and Rs.55 respectively in the market B where also 400 women shoppers are chosen at random. Test at 1% level of significance whether the average weekly food expenditures of the two populations of shoppers are equal.

The Guidelines to be followed by the question paper setters in QUANTITATIVE TECHNIQUES FOR BUSINESS for the first semester-end exams

PAPER TITLE: QUANTITATIVE TECHNIQUES FOR BUSINESS

PAPER-6 Semester-1 Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters & External Examiners

Subject Name: Quantitative Techniques for Business Decisions	Course: M.Com	Course Code: CO116	Department: Commerce (PG)
1. Dr.B.Jaya Prakash, Associate Professor, Deputy Head, Department of Commerce & Business Administration P.B Siddhartha College of Arts & Science Vijayawada. Mobile No. 9849813969.		2. Dr.J.Pratap Reddy, Professor, Dept.of Commerce, T.J.P.S.College, Guntur, Mobile: 9440542609.	

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A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165			
List of Paper Setters			
Subject Name: Business Law	Course: M.Com.	Course Code: CO211	Department: Commerce (PG)
1. . Mrs.B.Kalpna Assistant Professor Department of Commerce & Business Administration, P.B Siddhartha College of Arts & Science Vijayawada. Mobile No. 7842669134			2. Dr. B. Sankhar Babu, Assistant Professor, Department of Commerce, P.B Siddhartha College of Arts & Science Vijayawada Mobile No.: 9346487036

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165			
List of Paper Setters			
Subject Name: Financial Management	Course: M.Com	Course Code: CO212	Department:Commerce (PG)
1. Dr. P.D M. Raju Professor, Department of Commerce Prabhas College, Vijayawada. Mobile No. 9440751609			2. . Dr. B. Sankhar Babu, Assistant Professor, Department of Commerce, P.B Siddhartha College of Arts & Science Vijayawada Mobile No.: 9346487036

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters

Subject Name: Human Resources Management	Course: M.Com	Course Code: CO213	Department:Commerce (PG)
1. Mrs. A. Siva Naga Lakshmi, Assistant Professor Department of Commerce & Business Administration P.B Siddhartha College of Arts & Science Vijayawada.		2 Mrs.G.Lalitha Madhavi Assistant Professor Department of Commerce & Business Administration P.B Siddhartha College of Arts & Science Vijayawada. Mobile No.: 7799209460	

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters & External Examiners

Subject Name: Marketing Management	Course: M.Com	Course Code: CO214	Department:Commerce (PG)
1. Mrs.B.Kalpana Assistant Professor Department of Commerce & Business Administration, P.B Siddhartha College of Arts & Science Vijayawada. Mobile No. 7842669134		2. P. Padmanabam Assistant Professor Department of Commerce, SRR & CVR College, Vijayawada.	

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters & External Examiners

Subject Name: Business analytics and Research Methods	Course: M.Com	Course Code: CO215	Department:Commerce (PG)
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1. Dr.B.Jaya Prakash,
Associate Professor, Deputy Head,
Department of Commerce & Business
Administration
P.B Siddhartha College of Arts & Science
Vijayawada.
Mobile No. 9849813969

2 Dr. P.D M. Raju
Professor,
Department of Commerce
Prabhas College,
Vijayawada.
Mobile No. 9440751609

A.G&S.G .Siddhartha Degree College of Arts & Science-Vuyyuru- 521165

List of Paper Setters & External Examiners

Subject Name: E-commerce	Course: M.Com	Course Code: CO216	Department: Commerce (PG)
--------------------------	---------------	--------------------	---------------------------

1. . Mrs. A. Siva Naga Lakshmi,
Assistant Professor
Department of Commerce & Business
Administration
P.B Siddhartha College of Arts & Science
Vijayawada.

2. M J Rajpaul,
Assistant Professor
Department of Commerce,
SRR & CVR College,
Vijayawada.
Mobile No. 9502093357

Course structure and scheme of Teaching and Examination

Master of Commerce

I SEMESTER

Paper Code	Paper Title	Teaching Hours/ week		Core / Elective	Internal Marks	External Marks	No. of Credits
		Lecture	Tutorial/ Practical				
CO111	Management theory and practice	5	1	Core	30	70	5
CO112	Business Economics	5	1	Core	30	70	5
CO113	Business Environment	5	1	Core	30	70	5
CO114	Entrepreneurship Development	5	1	Core	30	70	5
CO115	Information Technology for Business	5	1	Core	30	70	5
CO116	Quantitative Techniques for Business decisions	5	1	Core	30	70	5

II SEMESTER

Paper Code	Paper Title	Teaching Hours/ week		Core / Elective	Internal Marks	External Marks	No. of Credits
		Lecture	Tutorial/ Practical				
CO211	Business Law	5	1	Core	30	70	5
COM212	Financial Management	5	1	Core	30	70	5
COM213	Human Resources Management	5	1	Core	30	70	5
COM214	Marketing Management	5	1	Core	30	70	5
COM215	Business analytics and Research Methods	5	1	Core	30	70	5
COM216	E-commerce	5	1	Core	30	70	5
GE02	CBCS Paper -1	3	1	Elective	50	--	3

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Business Laws

Subject Code :	CO201	I A Marks	30
No. of Lecture Hours / Week	05	End Exam Marks	70
Total Number of Lecture Hours	75	Total Marks	100
Practical Component	01 Hour/Week	Exam Hours	03

Course Outcomes: By the end of the course, students will be able:

CO-1 To provide knowledge and understanding nature of the company and how to conduct the board meetings , appointment of the directors

CO-2 To know about how to prevent the money laundering in the business

CO-3 To provide expert knowledge on how to protect consumers and also provide the knowledge about to Right to Information Act

CO-4 To provide expert knowledge on Information Technology Act

CO-5 To know about the powers and freedom of corporate and business ethics

Unit –I

Companies Act 2013: Definition and Nature of Company - Incorporation of company – Prospectus - Shares and Debentures - Acceptance of Deposits - Appointment and Qualification of Directors - Meetings of Boards and its powers - Inspection and investigation - Compromises, arrangements and amalgamations - Prevention of oppression and Mismanagement - SEBI Act, 1992

Unit- II

Depositories Act, 1996 – Prevention of Money Laundering Act, 2002.

Unit- III

Consumer Protection Act, 1986 – Competition Act, 2002 – Environment Protection Act – Right to Information Act, 2005

Unit –IV

Foreign Exchange Management Act, 1999- Cyber laws-Information Technology Act, 2000.

Unit – V

Corporate Governance and Business Ethics – Ethical practices and guidelines: Internal to the Organization –Power and freedom: External to the organization.

References

1. Bulchandani RR : Business Law, Himalaya Publishing House.
2. SC Kuchal: Business Law, Vikas publishing House.
3. Agarwal UK : Consumer Protection in India (Deep & Deep)
4. Gulshan SS : Business Law (Excel)
5. Bare Acts

The Guidelines to be followed by the question paper setters in BUSINESS LAW for the second semester-end exams

PAPER TITLE: BUSINESS LAWS

PAPER-I Semester-II Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

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MODEL QUESTION PAPER

M.COM. (REGULAR) DEGREE EXAMINATION

Second Semester

BUSINESS LAWS

Duration: 3 hours

Maximum Marks: 70

SECTION- A

Answer the Following Questions

5×4=20 Marks

1. a. (i) Compromises.

(OR)

(ii) Debentures.

b. (i) Objectives of Deposition Act, 1926

(OR)

(ii) Scope of prevention of money laundering act 2002.

c. (i) complaints

(OR)

(ii) Information exchange.

d. (i) Fintech

(OR)

(ii) Foreign policy

e. (i) Corporate governance.

(OR)

(ii) Code of conduct

SECTION – B

Answer All Questions

5×8=40Marks

2. a) Discuss the prevention of the companies act 1950. Is regard to removal of directors by the Central Government?

(Or)

- b) Define a manager and distinguish between a manager, managing director and a whole-time direction.

3. a) What is money laundering? Discuss how money laundering takes place?

(Or)

- b) Explain how is a depository similar to a bank?

4. a) Explain the objectives and main provisions of Competition Act 2002.

(Or)

- b) Explain the Right to Information Act 2005 in detail.

5. a) discuss the applicability and overall structure of FEMA Act 1999.

(Or)

- b) State and explain the digital signatures, digital certificates and R.S.A algorithm

6. a) what do you understand by the term “Corporate Governance” ? Why is it important?

(Or)

- b) Explain in detail the ethical practices by business in India.

SECTION C

Answer the following question.

(1 x 10=10 marks)

7. a) Explain briefly important clauses of Memorandum of Associations of a Company?

(Or)

- b) Explain Information Technology Act, 2000.

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FINANCIAL MANAGEMENT

Subject Code :	CO202	I A Marks	30
No. of Lecture Hours / Week	05	End Exam Marks	70
Total Number of Lecture Hours	75	Total Marks	100
Practical Component	01 Hour/Week	Exam Hours	03

Course Outcomes: By the end of the course, students will be able:

- CO 1 To understand the perspective on financial management function in the company and in its relation to domestic and international economy.
- CO 2 To provide illustration on financial management practices and policies, processes, techniques and strategies those are used in the financial management.
- CO 3 To develop knowledge on the type and characteristics of problems and the possibility of the occurrence of financial management problems,
- CO 4 To develop planning skill and monitoring skill in financial management functions effectively.
- CO 5 To apply the appropriate working capital management strategy to face the company challenges.

Unit-I: Introduction: Nature, Scope and Objectives of Financial Management: Finance Function–Profit Goal vs. Wealth Goal Maximization - Financial Manager in Modern business Organizations (Theory)

Unit-II: Investment decision: Capital Budgeting process –Methods of appraisal: Traditional Techniques and Discounted Cash Flow Methods – NPV vs. IRR - Capital rationing (Theory & problems)

Unit-III: Financing decisions: Concept of leverage – Types of Leverages –EBIT – EPS Analysis – Capital Structure – Theories of Capital Structure – Net Income approach – Net Operating income approach – Traditional view – MM Hypothesis Cost of Capital: Types of Cost of Capital - Weighted average Cost of capital. Capital Structure Determinants.(Theory & problems)

Unit-IV: Dividend decisions: Kinds of dividends, Dividend Policy types, Dividend Theories – Walter’s Model – Gordon’s Model – M-M Hypothesis (Theory & problems)

Unit-V: Working Capital Management: Meaning, Significance, Types of Working capital, Determinants of working capital, and Methods of Measuring working Capital Requirements - Operating cycle -Financing of Working Capital-Management of Cash, Receivables, and Inventory (Theory & problems)

References

1. Chandra Bose D., Fundamentals of Financial Management, 2nd Edition (2006) Prentice Hall of India.
2. Khan M Y and Jain P. K., Basic Financial Management: Text and Problems, 2nd Edition (2005) Tata McGraw Hill.
3. Pandey I M., Financial Management, 11th Edition (2015) Vikas Publishing House Pvt. Ltd.
4. .Pandey & Bhat, Cases in Financial Management, 2nd Edition (2000) Tata McGraw Hill.
5. Prasanna Chandra, Financial Management - Theory and Practice, 10th Edition (2019) Tata McGraw Hill.

The Guidelines to be followed by the question paper setters in FINANCIAL MANAGEMENT for the second semester-end exams

PAPER TITLE: FINANCIAL MANAGEMNT

PAPER-II Semester-II Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

**MODEL QUESTION PAPER
M.COM. (REGULAR) DEGREE EXAMINATION
Second Semester**

FINANCIAL MANAGEMENT

Duration: 3 hours

Maximum Marks: 70

SECTION- A

Answer Any Five of the Following Questions

5×4=20Marks

1. Write short notes on:

a. (i) Financing function.

(OR)

(ii) NPV method

b. (i) Operating leverage

(OR)

(ii) Cost of equity

c. (i) WACC

(OR)

(ii) Operating cycle

d. (i) Gross VS Net working capital

(OR)

(ii) Kinds of dividends

e. (i) Objectives of Financial Management

(OR)

(ii) Significance of Working Capital Management.

SECTION – B

Answer All Questions 5×8=40Marks

2. a) Discuss in detail, the scope of Financial Management.

(OR)

b) Do you support the concept of Profit Maximization or Wealth Maximization? Give Reasons.

3. a) What is Capital Budgeting? Explain briefly about techniques of Capital Budgeting?

(OR)

b) A company is considering an investment proposal to install a new machine at a cost of Rs.50,000/-. The machine will last for 5 years and has no salvage value. The estimated cash flows after taxes are:

Years	1	2	3	4	5
Estimated Cash flows after taxes (Rs.)	10,000	10,450	11,800	12,250	16,750

Compute the following :

a) Pay-Back period b) Average rate of Return c) NPV at 10% d) IRR

4 .a) Explain Net Income and Net Operating Income approach of capital structure theories.

(OR)

b) A firm forecasts that it will produce 15,000 units and generate EBIT of Rs. 3,00,000. The DOL for a quantity level of 15,000 units is 2.5. There is a possibility that the actual output could range from 10% below to 5% above the forecast value. Calculate the range of possible forecast errors for EBIT in % terms and also corresponding EBIT values.

5. a) Show the implications of dividend policy according to Gordon's Model for the give information:

Particulars	Growth Firm	Normal Firm	Declining Firm
r	15%	10%	8%

All the firms have $k=0.10$ and $EPS= Rs 10$. Show the values when the firms adopt 40% and 60% pay-out ratio.

(OR)

b) What is the substance of Miller and Modigliani 'dividend irrelevance' theorem?

6. a) Explain the concept of working capital and the factors that determine the working capital needs of the firm.

(OR)

b) A cost sheet of a company provides the following data:

Particulars	Cost per unit Rs
Raw Material	52
Direct labour	19.5
Overheads	39
Total Costs	110.5
Profit	19.5
Selling Price	130

The following is the additional information available:

Average raw material in stock: one month;
 Average materials in process: half month
 Credit allowed by suppliers: one month
 Credit allowed to debtors: two month;
 Time Lag in payment of wages: one and a half weeks.
 Overheads: one month.
 One fourth of sales are on cash basis.

Cash balance is expected to be Rs. 1, 20,000. You are required to prepare a statement showing the working capital needed to finance a level of activity of 70,000 units of output. Assume that production is carried on evenly throughout the year and wages and overheads accrue similarly.

SECTION C

Answer the following question.

(1 x 10=10 marks)

7. a) A company is considering an investment proposal to install new machine at a cost of Rs.50, 000. The machine will last for 5 years and has no salvage value. The estimated cash flows after taxes are:

Year	Estimated Cash flows after taxes
1	Rs. 10,000
2	Rs.10,450
3	Rs. 11,800
4	Rs. 12,250
5	Rs. 16,750

Compute the following:

- Payback period
- Average rate of return
- Internal rate of return
- Net present value at 10%

(OR)

b) Explain about various dividend theories.

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HUMAN RESOURCE MANAGEMENT

Subject Code :	CO203	I A Marks	30
No. of Lecture Hours / Week	05	End Exam Marks	70
Total Number of Lecture Hours	75	Total Marks	100
Practical Component	01 Hour/Week	Exam Hours	03

Course Outcomes: By the end of the course, students will be able:

- CO-1 To cover the basic concepts of Human Resource management.
- CO-2 To contribute the development of human resource planning, implementation, and evaluation of employee recruitment, selection, and retention plans and processes)
- CO-3 To develop, implement, and evaluate employee orientation, training, and development programs
- CO-4 To administer and contribute to the design and evaluation of the performance management program
- CO-5 To develop the students' ability to learn concepts like compensation, employee welfare, and industrial relation issues

Unit- I: Human Resource Management: Nature and significance, functions of HRM, Qualities and Role of HR Manager, HRM Model, HRM in a changing Environment.

Unit-II: Human Resource Planning: Objectives, process, factors affecting HR Planning, Requisites for successful HR Planning, Recruitment – Factors influencing, Sources of Recruitment – E- Recruitment-Selection Process – Placement, induction and Socialization – Promotion and Transfers

Unit-III: Employee Training: Significance – Identification of Training Needs – Employee Training Methods – Executive Development Methods – Evaluation of Training and Development Programs – Methods of Evaluation -Limitations to its effectiveness

Unit-IV: Performance Appraisal: Scope & Significance – Methods of Appraisal – Limitations of Appraisal - Career Planning and Development – Counseling- Mentoring-Coaching

Unit – V:Wage and Salary Administration: Wage Structure and Policy – Wage Differentials – Wage Payment Methods – Incentives – Fringe Benefits –Industrial Relations: Causes of Disputes and Settlement - Role of State in Industrial Relations - Collective Bargaining -Employee Participation in Management - Quality of Work Life.

References:

1. Aswathappa. Human Resource Management 6thEdition (2010). Tata McGraw Hill, New Delhi.
2. Biswanath Ghosh. Human Resource Development and Management, (2005) Jain Book Depot , New Delhi
3. C. B. Mamoria. Personnel management 21stEdition (2012). Himalaya Publishing House , New Delhi:
4. Edwin Flippo. Personnel management 5thEdition (1994). Tata McGraw Hill, New Delhi.
5. Rajashree Shinde, A. Abhilasha, A. Ramakumar Human Resource Management 1st Edition (2017). Himalaya Publishing House, New Delhi.
6. Sahni Personnel Management 5th Edition (2005). Kalyani Publisher, New Delhi.
7. SubbaRao. Human Resources management 12thEdition (2011). Himalaya Publishing House, New Delhi.
8. V. S. P. Rao, Human Resources Management, 3rd Edition (2010). Excel Books, New Delhi.

The Guidelines to be followed by the question paper setters in HUMAN RESOURCE MANAGEMNT for the second semester-end exams

PAPER TITLE: HUMAN RESOURCE MANAGEMNT

PAPER-III Semester-II Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

MODEL QUESTION PAPER

M.COM. (REGULAR) DEGREE EXAMINATION

Second Semester

HUMAN RESOURCE MANAGEMENT

Duration: 3 hours

Maximum Marks: 70

SECTION- A

Answer Any Five of the Following Questions

5×4=20 Marks

1. Write Short Notes on:

a. (i) Role of HRM

(OR)

(ii) Human Resource planning.

b. (i) Vestibule Training.

(OR)

(ii) Career planning.

c. (i) Quality of Work Life.

(OR)

(ii) Fringe benefits.

d. (i) E-Recruitment

(OR)

(ii) HRM Model.

e. (i) Sources of Recruitment.

(OR)

(ii) Wage Payment Methods.

SECTION – B

Answer All Questions

5×8=40Marks

2. a) Define Human Resource Management and discuss the objectives and functions of HRM.

(Or)

b) Explain the role of HRM in the changing environment.

3. a) What is human resource planning? Analyze various steps in the process of human resource Planning.

(Or)

b) Explain the Sources Recruitment with relevant merits and limitations

4. a) Identify the employee training methods.

(Or)

b) Show the Importance of training and Distinguish between employee training and executive development.

5. a) Discuss the methods of performance appraisal.

(Or)

b) Examine the Significance and limitations of Performance appraisal.

6.a) Define the concept wage and salary administration. Explain the wage payment methods.

(Or)

b) Evaluate the Methods of Employee participation in management.

SECTION C

Answer the following question.

(1 x 10=10marks)

7. a) what is meant by the term Industrial Disputes? Discuss its causes and settlement mechanism.

(Or)

b) Define HRM. Explain the nature, scope& significance of HRM.

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MARKETING MANAGEMENT

Subject Code :	CO204	I A Marks	30
No. of Lecture Hours / Week	05	End Exam Marks	70
Total Number of Lecture Hours	75	Total Marks	100
Practical Component	01 Hour/Week	Exam Hours	03

Course Outcomes: By the end of the course, students will be able:

- CO-1 Understand the concepts of marketing and to know the changing context of marketing environment.
- CO-2 Appreciating the knowledge of consumer behaviour in implementing the marketing strategies to satisfy target customer and also distinguish between Marketing Information System and Market Research.
- CO-3 Conceptual understanding of product management and issues relating with marketing of services.
- CO-4 Understand different price strategies and the dynamics of channel management.
- CO-5 Be able to know the elements of promotion mix and the importance of integrated marketing communications.

Unit-I: Marketing-Concepts-Approaches to the Study of Marketing – Functions of Marketing-Marketing Environment.

Unit-II: Consumer Behavior – Factors affecting Consumer Behavior- Market Segmentation – Market Targeting and Positioning – Marketing Information System and Marketing Research.

Unit-III: Marketing Mix: Product Planning – New Product Development – Product Life Cycle– Branding &Packaging – Product line- Product Mix Management- Product Vs Service.

Unit-IV: Pricing and Distribution: Pricing Objectives – Methods and Strategies ; Channels of distribution – Channel Selection and Management -Retail Management.

Unit-V: Promotion: Promotion Mix-Personal Selling-Advertising - Sales Promotion, Publicity and Public Relations – Direct Marketing; Promotional strategies- Web Marketing – Integrated Marketing Communications.

References

1. Aparna Tembulkar, Marketing Management, 2nd Edition. (2014) Nirali Prakashan, Pune.
2. Kazmi S H, marketing Management: Text and Cases, 1st Edition, (2007), Excel Books, New Delhi.
3. Philip Kotler, Kevin Lane Keller, Marketing Management –Global Edition, 15th Edition. (2016) Pearson India Education Services Pvt Ltd.
4. Rajan Suksena, Marketing Management, 5th Edition.(2017) McGraw Hill Education (India) Private Limited.
5. Ramaswamy, Namakumari, Marketing Management: planning, Implementation & Control, 6th Edition, (2018), Sage Publisher, New Delhi.
6. Sherlekar S.A, Marketing Management, 13th Edition, (2008), Himalaya Publishing House, Mumbai.

The Guidelines to be followed by the question paper setters in
 MARKETING MANAGEMENT for the second semester-end exams

PAPER TITLE: MARKETING MANAGEMNT

PAPER-IV Semester-II Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

**MODEL QUESTION PAPER
M.COM. (REGULAR) DEGREE EXAMINATION
Second Semester**

MARKETING MANAGEMENT-CO204

Duration: 3 hours

Maximum Marks: 70

SECTION- A

Answer Any Five of the Following Questions

5×4=20 Marks

1. Write short notes on:

- (a) (i) Product vs Service.
(OR)
(ii) Targeting
- (b) (i) Marketing Information System
(OR)
(ii) Channel Conflict
- (c) (i) Integrated Marketing Communication
(OR)
(ii) Psychological Pricing
- (d) (i) Global Marketing
(OR)
(ii) Positioning.
- (e) (i) Functions of Marketing.
(OR)
(ii) Pricing Objectives.

SECTION – B

Answer All Questions

5×8=40Marks

2. a) Differentiate between sales and marketing. What are the core concepts of marketing?
(Or)
b) What are the elements of marketing environment? Explain their influence on marketing.
3. a) Define Marketing Research. Explain various steps involved in Marketing Research.
(Or)
b) Define Market Segmentation. What are the types of Market Segmentation? Explain them briefly.

4. a) What is meant by Product Life Cycle? Explain the stages of Product Life Cycle with Suitable illustration.
(Or)
b) Define Brand. What are the various Brand strategies?
5. a) Explain the objectives of Pricing. What are the various price adjustment strategies?
(Or)
b) What factors are to be considered in the selection of Channel Members? Explain the Channel selection criteria.
6. a) Describe the role of 'Web Marketing' in present day business context.
(Or)
b) Define 'Sales Promotion'. What are the sales promotion techniques followed by marketing companies? Explain with suitable examples.

SECTION - C

Answer the following question.

(1 x 10=10 marks)

7. a) Define 'Consumer Behaviour' .Explain various factors influencing Consumer Behaviour.
(Or)
b) Define 'Advertising'. Explain its role in promotion of fast moving consumer goods.

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BUSINESS ANALYTICS AND RESEARCH METHODS

Subject Code :	CO205	I A Marks	30
No. of Lecture Hours / Week	05	End Exam Marks	70
Total Number of Lecture Hours	75	Total Marks	100
Practical Component	01 Hour/Week	Exam Hours	03

Course Outcomes: By the end of the course, students will be able:

- CO-1 To understand basic concepts of research and formulate research problems and process.
- CO-2 To generate an awareness of research design and data collection methods.
- CO-3 To develop and understand of sampling design and techniques.
- CO-4 To understand how to analyse and interpretation of the data.
- CO-5 To provide expert knowledge about to write a research report and thesis.

Unit –I : Introduction-Importance of Research, Types of research , Research Process-Problem Identification- Formulation-Classification, Concept and Construction of Hypothesis – Steps in Testing Hypothesis.

Unit-II: Research Design-Meaning, purpose and Principles – Types of Research Design – Exploratory- Descriptive- Experimental, Data Collection-Sources of Data-Methods of Data Collection-Questionnaire Design and Pre Testing of Questionnaire.

Unit-III: Sampling & Sampling Designs-Determination of Sample Size-Census Survey Vs Sample Survey –Advantages of Sampling-Sampling Methods-Probability Sampling-Non Probability Sampling.

Unit-IV: Data Tabulation-Analysis and Interpretation: Tabulation of data and general rules of tabulation Graphic and Diagrammatic Representation of Data-ANOVA-One way and Two way classification.

Unit-V: Research Report Writing and Presentation: Concept, Purpose, Guidelines for Research Report Writing –Steps in Report Writing-Layout of Report-Types of Research Reports-Presentation of Research Report.

Reference Books:

1. Panneer Selvam- Research Methodology, 2nd Edition (2014) PHI
2. Bhattacharya D.K., “Research Methodology” New Delhi. 2nd Edition (2006) Excel Books
3. Cooper, “Business Research Methods”, , New Delhi. 11th Edition (2012) Tata McGraw Hill

The Guidelines to be followed by the question paper setters in BUSINESS ANALYTICS AND RESEARCH METHODS for the second semester-end exams

PAPER TITLE: BUSINESS ANALYTICS AND RESEARCH METHODS

PAPER-V Semester-II Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

MODEL QUESTION PAPER
M.COM. (REGULAR) DEGREE EXAMINATION

Second Semester

BUSINESS RESEARCH METHODS

Time: Three hours

Maximum Marks: 70

SECTION- A

Answer Any Five of the Following Questions

(5X4 = 20 Marks)

1. Write short notes on:

a) (i) Importance of Research

(OR)

(ii) Simple Random Sampling

b) (i) Research Problem

(OR)

(ii) Primary Vs Secondary data

c) (i) Procedure for Testing of Hypothesis

(OR)

(ii) Bar and Pie charts

d) (i) Layout of report

(OR)

(ii) Types of Tabulation

e) (i) ANOVA

(OR)

(ii) Research Design.

SECTION- B

Answer All Questions.

(5X8 = 40 Marks)

2. a) What is Research? Explain the research process in details.

(OR)

b) Explain different types of research.

3. a) What is Research Design ? Distinguish between diagnostic and Exploratory Research designs.

(OR)

b) Briefly explain various techniques of data collection in business research.

4. a) Explain Principal steps in a Sample Survey?

(OR)

b) Distinguish between Systematic and Stratified Sampling.

5. a) What are different parts of statistical table? Give an example to illustrate.

(OR)

b) Explain the procedure for analysis of variance (ANOVA) two-way classification.

6. a) Explain various types of research reports used in business research?

(OR)

b) Explain the significance of research report and narrate the various steps involved in writing such a report.

SECTION- C

Answer the following question.

(1 x 10=10 marks)

7. a) Set up an analysis of variance table for the following per acre production data for three varieties of wheat, each grown on 4 plots and state if the variety differences are significant.

Plot of Land	Per acre production data		
	Variety of Wheat		
	A	B	C
1	6	5	5
2	7	5	4
3	3	3	3
4	8	7	4

(OR)

b) Explain the criteria of Good Research and also explain problems encountered by researchers in India.

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E-COMMERCE

Subject Code :	CO206	I A Marks	30
No. of Lecture Hours / Week	05	End Exam Marks	70
Total Number of Lecture Hours	75	Total Marks	100
Practical Component	01 Hour/Week	Exam Hours	03

Course Outcomes: By the end of the course, students will be able:

- CO-1 To remember and understand the basic concepts of E-commerce, E-business Internet and World Wide Web.
- CO-2 To understand how different technologies are implemented in e-commerce.
- CO-3 To analyse the role of e-marketing and advertisements in e-commerce.
- CO-4 To analyse the impact of CRM and SCM on e-commerce.
- CO-5 To learn about different types of electronic payment system, protocols, security schemes and cash less economy.

Unit-I : History of E-commerce and Indian Business Context: origin of E-commerce – Traditional vs. E-Commerce - Internet and World Wide Web- Business Models for e-Commerce-B2C, B2B, C2C & C2B, Merits and Limitations- Advantages and Disadvantages of E-commerce - Introduction to E-business -E-commerce vs E-business

Unit-II: Technologies of the World Wide Web- Internet client-server application-Telnet, PTP, IRC, Chat, ICQ & MIME, Networks & Internet :communication switching -Network routers-URL-IPv6-TCP web site-Website goals & Objectives Strategies for website Development-ISP Broadband Technologies- Hypertext- JavaScript and XML

Unit-III: E-Marketing- Traditional Marketing, Online Marketing- Advantages of online Marketing - Advertisements in E-commerce- various means of advertising- advertisement strategies-Intelligent Agents.

Unit-IV: CRM-Traditional methods-Technology support-E-CRM-Customer Life Cycle- CRM Capabilities and Customer Life Cycle-Data Mining in CRM - e-Supply Chain- Old ways of Managing supply and information flow-new ways of managing supply chain- several ways to reduce inventory- Real time benefits of e-Supply Chain- objectives of SCM -E-supply chain Components and architecture-Major trends in E-SCM

Unit-V: E-Commerce Payment Systems-Electronic Payments with Protocols-Security schemes-Electronic Fund Transfer and Debit Cards-E-Cash, Properties of E-Cash-E-Cash in Action- Operational Risk and E-Cash-Legal issues- E- Cheque - Risk and E-Payments Systems- Cashless Economy

References

1. PT Joseph SJ E-Commerce, An Indian Perspective, 3rd Edition, Volume 2, (2010), Prentice Hall of India
2. Effraim Turban, Joe Lee, David Kind-H Michael Chung E-Commerce, A Management Perspective, 6th Edition (2009), Pearson Education Asia.
3. Pandey US & ShuklaEr. S., E-Commerce & M- Commerce Technology, Revised Edition (2018), S. Chand& Company New Delhi.
4. Gary P. Schneider, E-Commerce Strategy Technology & Implementation, 9th Edition (2012), Cengage Learning, New Delhi.
5. Trepper, E-Commerce Strategies, Prentice Hall of India (2006) revised Edition, New Delhi.
6. Jonathan Reynolds, E-Business A Management Perspective 2nd Edition (2009), Oxford University Press.

The Guidelines to be followed by the question paper setters in E-COMMERCE for the second semester-end exams

PAPER TITLE: E-COMMERCE

PAPER-VI Semester-II Maximum Marks: 70 Duration: 3 Hours

Weightage for the question paper

Syllabus	Section –A (short answer questions) (with internal choice)	Section- B (Long answer questions) (with internal choice)	Section –C (essay question) (with internal choice)
Unit -1	1 (a or b)	1 (a or b)	Any unit
Unit -2	1 (a or b)	1 (a or b)	
Unit -3	1 (a or b)	1 (a or b)	
Unit -4	1 (a or b)	1 (a or b)	
Unit -5	1 (a or b)	1 (a or b)	

- Each short answer question carries 4 marks in section-A.
- Each long answer question carries 8 marks in section-B.
- Each essay answer question carries 10 marks in section-C.

The Question Paper Setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us.

MODEL QUESTION PAPER
M.COM. (REGULAR) DEGREE EXAMINATION
Second Semester
E-COMMERCE

Duration: 3 hours

Maximum Marks: 70

SECTION- A

Answer Any Five of the Following Questions

5×4=20 Marks

1. Write short notes on:

- a) (i) B2C
(OR)
(ii) World Wide Web
- b) (i) Software Agent
(OR)
(ii) XML
- c) (i) Intelligent Agents
(OR)
(ii) Supply Chain Management
- d) (i) Electronic Fund Transfer
(OR)
(ii) Online Marketing
- e) (i) E-Cash
(OR)
(ii) Website Goals

SECTION – B

Answer All Questions

5×8=40Marks

2. (a) Explain Business models of E-commerce.
(Or)
(b) What are the advantages and Disadvantages of E-commerce? s
3. (a) Explain Internet Client-Server Applications.
(Or)
(b) Explain Website goals, Objectives and Strategies.
4. (a) What is e-marketing? Distinguish E-marketing and Traditional Marketing
(Or)
(b) What are the strategies and advantages of advertisements in e-commerce?

5. (a) Explain Old ways of managing supply and information flow-new way of Managing supply chain and Supply chain Architecture.

(Or)

(b) Explain CRM Technology, CRM toolkit and CRM customer life cycle.

6. (a) Explain various security schemes in Electronic Payment System.

(Or)

(b) Explain Different protocols used in Electronic Payment system.

SECTION - C

Answer the following question.

(1 x 10=10 marks)

7. (a) Explain the concept of ISP Broadband Technologies.

(Or)

(b) Explain the Role of E-commerce in India.

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HUMAN VALUES AND ETHICS (1L + 1T + 1P)

Subject Code :	GE02	I A Marks	50
No. of Lecture Hours / Week	03	End Exam Marks	-
Total Number of Lecture Hours	45	Total Marks	50
Practical Component	01 Hour/Week	Exam Hours	03

Course Outcomes: By the end of the course, students will be able:

- CO 1 To provide the basic understanding about importance of Value Education, Self-Exploration, and Human aspirations.
- CO 2 To understand the importance of Process for Value Education
- CO 3 To gain knowledge on Understanding Harmony in the Human Being
- CO 4 To understand the concept of Harmony in Myself
- CO 5 Understanding Harmony in the Family and Society – harmony in Human - Human Relationship

Unit – I: Introduction –Need, Basic Guidelines and Content

1. Understanding the need , basic guidelines, content and process for value Education
2. Self-Exploration – What is it? – its content and process: 'Natural Acceptance' and Experiential Validation – as the mechanism for self-explanation
3. Continuous Happiness and Prosperity – A look at basic Human Aspirations

Unit – II: Process for Value Education

1. Right Understanding, Relationship and Physical Facilities – basic requirements for fulfillment of aspirations of every human being with their correct priority
2. Understanding Happiness and prosperity correctly – A critical appraisal of the current Scenario 17
3. Method to fulfill the above human aspirations; understanding and living in harmony at various levels

Unit – III: Understanding Harmony in the Human Being

1. Understanding human being as a co-existence of the sentient 'I' and the material 'Body'
2. Understanding the needs of Self ('I') and 'Body'
3. Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer)

Unit –IV: Harmony in Myself

1. Understanding the characteristics and activities of 'I' and harmony in 'I'
2. Understanding the harmony of I with the Body - correct appraisal of Physical needs, meaning of Prosperity in detail
3. Programs to ensure Sanyam and Swasthya – practice exercises and Case Studies will be taken up in Practice Sessions.

Unit – V: Understanding Harmony in the Family and Society – harmony in Human - Human Relationship

1. Understanding harmony in the family – the basic unit of human interaction
2. Understanding values in human relationship; meaning of Nyaya and Program for its fulfillment to ensure Ubhay-tripti
3. Trust (Vishwas) and Respect (Samman) as the foundational values of relationship.

Text Books

- R R Gaur, R, Sangal, G.P Bagaria, 2009, A Foundation Course in value Education(English)
Pradeep Kumar Ramancharla, 2013, A foundation course in value education (Telugu)
R R Gaur, R Sangal G P Bagaria, 2009, Teacher’s Manual (English)
Pradeep Kumar Ramancharla, 2013, Teacher’s Manual (Telugu)

Reference Books

1. Ivan Illich, 1974, Energy & Equity, The Trinity Press, Worcester, and Harper Collins, USA
2. E.F. Schumacher, 1973, small is Beautiful; a study of economics as if people mattered, Blond & Briggs, Britain
3. A Nagraj, 1998, Jeevanvidya to Na Prayanam, Hyderabad
4. R. Pradeep Kumar, 2013, JeevanVidya to Na Prayanam, Hyderabad
5. Susan George, 1976, How the other half Dies, Penguin Press, Reprinted 1986, 1991
6. P.L. Dhar, R.R. Gaur, 1990, Science and Humanism, common wealth publishers
18
7. A.N. Tripathy, 2003, Human values, New Age International Publishers
8. Subhas Palekar, 2000, How to practice natural Farming, Pracheen (Vaidik)
Krishitantrashodh, Amravati
9. Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, William W. Behrens III, 1972, Limits to Growth – club of Rome’s report, universe Books
10. E.G. Seebauer & Robert, L BERRY, 2000, Foundations of Ethics for Scientists & Engineers, Oxford University Press
11. M. Govindrajran, S Natrajan & V.S. Senthikumar, Engineering Ethics (including human Values), Eastern Economy Edition, Prentice hall of India Ltd
12. B P Banerjee, 2005, Foundations of Ethics and Management, Excel books
13. B.L. Bajpai, 2004, Indian Ethos and Modern Management , New Royal book Co;
Lucknow, Reprinted 2008

Relevant CDs, Movies, Documentaries & Other Literature

1. Value Education Website, <http://www.uptu.ac.in>
2. Story of Stuff, <http://www.storyofstuff.com>
3. Al Gore, An Inconvenient Truth, paramount Classics, USA
4. Charlie Chaplin, Modern Times, United Artists, USA

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Education



DEPARTMENT OF COMPUTER SCIENCE

Minutes of the meeting of Board of Studies in Computer Science for PG (M.Sc.)

Date: 25-11-2020



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DEPARTMENT OF COMPUTER SCIENCE (PG)

Minutes of the meeting of Board of Studies in Computer Science for M.Sc. (Computer Science) programme held on 25th November 2020 at 11:00A.M. for the Department of Computer Science.

Members Present		
Name of the Member	Role	Signature
Smt. T.Keerthi, I/C HOD, Dept. of Computer Science, A.G & S.G Siddhartha Degree College of Arts & Science, Vuyyuru-521165. Mobile: 9959558485 E-Mail: keerthitineni16@gmail.com	Chairman	
Dr. K.Madhavi, Associate Professor, Dept of Computer Science, JNTUA. College of Engineering, Anantapur. Mobile: 9440206501 E-Mail: kasamadhavi@yahoo.com	University Nominee, Krishna University	
Dr.R.Satya Prasad, Professor, Department of Computer Science, Acharya Nagarjuna University, Nagarjuna Nagar-522508. Mobile: 9848487478 E-Mail: profrsp@gmail.com	Subject Expert	
Dr.T.S.Ravi Kiran, H.O.D & Assistant Professor, Dept of Computer Science, P.B. Siddhartha Degree College of Arts & Science-Vijayawada -520002. Mobile: 9441176980 E-Mail: kirantsr1@gmail.com	Special Invitee	
Sri.U.Sairam, C.E.O, Codegnan I.T Solutions OPC PVT LTD., Vijayawada 520002 Mobile: 9959555952 E-Mail: uppugundlasairam@gmail.com	Industrialist	
Ms. P.Srujana, Software Developer, Tonmetri Info Solutions, Vijayawada. Mobile: 9032671688 E-Mail: srujanapaladugu26@gmail.com	Alumni Representative	
Smt. V. Muni, Assistant Professor, A.G & S.G Siddhartha Degree College of Arts & Science. Mobile: 8099205522 E-Mail: muni.j2ee@gmail.com	Member	
Sri.B.MadhuSudhana Rao, Assistant Professor, A.G & S.G Siddhartha Degree College of Arts & Science. Mobile: 7842664766 E-Mail: ms.madhu27@gmail.com	Member	

PG

AGENDA

- To discuss and approve the *Structure, Syllabi and Model Question Papers* of *First Semester* of M.Sc.(Computer Science) for the batch of students admitted from the academic year 2020-21 and onwards.
- To discuss and approve the *Structure, Syllabi and Model Question Papers* of *Second Semester* of M.Sc.(Computer Science) for the batch of students admitted from the academic year 2020-21 and onwards.

RESOLUTIONS

- **Resolved and recommended to adopt the Krishna University PG Regulation (R20) for the syllabus, model papers in the First Semester for the following courses:**
 - Data Structures (20MCS101)
 - Programming & Problem Solving using Python (20MCS102)
 - Computer Organization (20MCS103)
 - Formal Language & Automata Theory (20MCS104)
 - Python Lab (20MCS105)
 - DS Lab (20MCS106)
- **It is resolved and recommended to introduce new course “Technical report writing (TRW101) in the First Semester in addition to above courses**
- **Resolved and recommended to continue the same syllabus, model papers without changes in the Second Semester for the following courses:**
 - Database Management Systems (20MCS201)
 - Software Engineering (20MCS202)
 - Operating System (20MCS203)
- **Resolved and recommended to introduce new syllabus, model papers in the Second Semester for the following courses:**
 - Computer networks (20MCS204)
 - Database Management system Lab (20MCS206L)
 - OEL programming of problem solving using python Program (20MCS205)

20MCS101: DATA STRUCTURES

Details of the syllabus

Unit 1	Introduction and Overview : Elementary Data Organization, Data Structures, Data Structure Operations, Algorithms: Complexity, Time-Space Tradeoff. Preliminaries : Mathematical Notations and Functions, Algorithmic Notation, Control Structures, Complexity of Algorithms. Other Asymptotic Notations, Sub algorithms, Variables, Data Types
Unit 2	String Processing : Storing Strings, Character Data Type, String Operations, Word Processing, Pattern Matching Algorithms. Arrays, Records and Pointers : Linear Arrays, Representation and Traversing Linear Arrays, Inserting and Deleting, Bubble Sort, Linear Search, Binary Search, Multidimensional Arrays, Pointer Arrays, Record Structures, Representation of records in memory, Parallel Arrays, Matrices, Sparse Matrices.
Unit 3	Linked Lists : Representation, Traversing, Searching, Memory Allocation: Garbage Collection, Insertion, Deletion, Header Linked Lists Two-Way Lists. Stacks, Queues, Recursion : Stacks, Array representation, Linked List representation, Evaluation of Arithmetic Expressions, Quick sort, Recursion, Towers of Hanoi, Queues, Linked representation of Queues, Deques, Priority Queues.
Unit 4	Trees : Binary trees, Representing and traversing binary trees, Traversal algorithms using stacks, Header nodes, Binary Search Trees, Searching, Insertion and Deletion in Binary Search Trees, AVL Search Trees, Insertion and Deletion in AVL trees, m-way search trees, searching, insertion and deletion in m-way search tree, Heap: Heap Sort, Huffman's Algorithms, General Trees
Unit 5	Graphs : Terminology, Sequential representation of Graphs, Warshall's Algorithm, Linked representation of Graphs, Operations on Graphs, Traversing a Graph, Topological Sorting. Sorting and Searching : Insertion Sort, Selection sort, Merging, Merge sort, Radix sort, Searching and Data modification, Hashing.

Text books

	Author	Title	Publisher
1	Seymour Lipschutz	Data Structures	McGraw Hill (Schaum's Outlines)

Reference books

	Author	Title	Publisher
1	Seymour Lipschutz	Theory and Problems of Data Structures	McGraw Hill (Schaum's Outlines)
2	John R Hubbard, Second Edition	Data Structures with Java	McGraw Hill (Schaum's Outlines)
3	Robert Lafore	Data Structures & Algorithms in Java	Second edition, Pearson Education

20MCS102: PROGRAMMING AND PROBLEM SOLVING USING PYTHON

Details of the syllabus

Unit 1	Basics of Python Programming -Features of Python, History of Python, The Future of Python, Writing and Executing First Python Program, Literal Constants, Variables and Identifiers, Data Types, Input Operation, Comments, Reserved Words, Indentation, Operators and Expressions, Expressions in Python, Operations on Strings, Other Data Types, Type Conversion.
Unit 2	Decision Control Statements -Conditional Branching Statements, Basic Loop Structures, Nested Loops, The break statement, The continue statement, The pass statement. The else statement used with loops. Functions and Modules - Function Definition, Function Call, Variable Scope and Lifetime, The return statement, More on Defining Functions, Recursive functions, Modules, Packages in Python, Standard Library Modules.
Unit 3	Python Strings Revisited -Concatenating, Appending and Multiplying Strings, String formatting operator, Built in String Methods and Functions, Comparing Strings, Regular Expressions. Data Structures - Sequence, Lists, Functional Programming, Tuple, Sets, Dictionaries.
Unit 4	Classes and Objects - Classes and Objects, Class Method and self Argument, Class variables and Object Variables, Public and Private Data Members, Private Methods, Calling a Class Method from Another Class Method, Built-in Class Attributes, Class Methods, Static Methods.
Unit 5	Inheritance - Inheriting Classes in Python, Types of Inheritance, Abstract Classes and Interfaces. Error and Exception Handling - Introduction to Errors and Exceptions, Handling Exceptions, Raising Exceptions, Built- in and User defined Exceptions Operator Overloading - Concept of Operator Overloading, Advantage of Operator Overloading, Implementing Operator Overloading.

Text books

	Author	Title	Publisher
1	Reema Thareja	Python Programming Using Problem Solving Approach	Oxford University Press

Reference books

	Author	Title	Publisher
1	Wesley Chun	Core Python Programming	Prentice Hall

20MCS103: COMPUTER ORGANIZATION

Details of the syllabus

Unit 1	<p>Digital Logic Circuits: Digital Computers, Logic Gates, Boolean algebra, Map Simplification, Combinational Circuits, Flip-flops, Sequential Circuits.</p> <p>Digital Components: Integrated Circuits, Decoders, Multiplexers, Registers, Shift Registers, Binary Counters, Memory Unit.</p> <p>Data Representation: Data types, Complements, Fixed-point Representation, Floating-point representation, other binary codes, Error detection Codes.</p>
Unit 2	<p>Register Transfer and Micro operations: Register transfer language, Register transfer, Bus & memory Transfers, Arithmetic micro operations, logic micro operations, Shift micro operations, Arithmetic Logic Shift Unit</p> <p>Basic Computer Organization and Design: Instruction Codes, Computer registers, Computer Instructions, Timing and Control, Instruction Cycle, Memory-Reference Instructions, Input-output Interrupt.</p>
Unit 3	<p>Micro programmed Control: Control memory, Address Sequencing, Micro program Example, Design of control Unit.</p> <p>Central Processing Unit: General Register Organization, Stack Organization, Instruction Formats, Addressing Modes, Data Transfer and Manipulation, Program Control.</p>
Unit 4	<p>Pipeline and Vector Processing: Parallel Processing, Pipelining, Arithmetic Pipeline, Instruction Pipeline, RISC Pipeline, Vector Processing, Array Processors.</p> <p>Computer Arithmetic: Introduction, Addition and subtraction, Multiplication Algorithm, Floating point arithmetic operations, Decimal Arithmetic unit, Decimal Arithmetic operations.</p>
Unit 5	<p>Input-Output Organization: Peripheral Devices, Input-Output Interface, Asynchronous Data Transfer, Modes of Transfer, Priority Interrupt, Direct Memory Access (DMA).</p> <p>Memory Organization: Memory Hierarchy, Main Memory, Auxiliary Memory, Associative Memory, Cache Memory, Virtual Memory.</p>

Text books

	Author	Title	Publisher
1	M. Morris Mano	Computer System Architecture	3 rd Edition, Pearson Education (2008).

Reference books

	Author	Title	Publisher
1	V. Rajaraman, T. Radha Krishnan	Computer Organization and Architecture	PHI
2	Behrooz Parhami	Computer Architecture	Oxford (2007)
3	ISRD group	Computer Organization	Ace series, TMH (2007)
4	William Stallings	Computer Organization and Architecture – Designing for Performance	Pearson Education (2005)
5	P.Chakraborty	Computer Architecture and Organization	Jaico Books (2008)

20MCS104: FORMAL LANGUAGES AND AUTOMATA THEORY

Details of the syllabus

Unit 1	<p>Fundamentals: Strings, Alphabet, Language, Operations, finite automaton model, acceptance of strings, and languages, FA, transition diagrams and Language recognizers.</p> <p>Finite Automata: Deterministic finite automaton, Non deterministic finite automaton and NFA with ϵ transitions - Significance, acceptance of languages, equivalence between NFA with and without ϵ transitions, NFA to DFA conversion, minimization of FSM, equivalence between two FSMs, Finite Automata with output- Moore and Mealy machines.</p>
Unit 2	<p>Regular Languages: Regular sets, regular expressions, identity rules, construction of finite automata for a given regular expressions and its inter conversion, Pumping lemma of regular sets, closure properties of regular sets (proofs not required).</p>
Unit 3	<p>Grammar Formalism: Regular grammars-right linear and left linear grammars, equivalence between regular linear grammar and FA, inter conversion, Context free grammar, derivation trees, sentential forms, right most and leftmost derivation of strings.</p> <p>Context Free Grammars: Ambiguity in context free grammars. Minimization of Context Free Grammars. Chomsky normal form, Greibach normal form, Pumping Lemma for Context Free Languages. Enumeration properties of CFL (proofs not required).</p>
Unit 4	<p>Push down Automata: Definition, model, design of PDA, acceptance by final state and acceptance by empty stack, equivalence of CFL and PDA, interconversion (proofs not required), Introduction to DCFL and DPDA.</p>
Unit 5	<p>Turing Machine: Definition, model, design of TM, recursively enumerable languages and recursive languages, types of Turing machines (proofs not required).</p> <p>Computability Theory: Chomsky hierarchy of languages, decidability of problems, undecidability of Posts Correspondence problem, Definition of P and NP problems.</p>

Text books

	Author	Title	Publisher
1	Hopcroft H.E. and Ullman	Introduction to Automata Theory Languages and Computation	J. D. Pearson Education

Reference books

	Author	Title	Publisher
1	John C Martin	Introduction to languages and the Theory of Computation	TMH
2	Lewis H.P. & Papadimitriou C.H	Elements of Theory of Computation	Pearson PHI
3	Mishra and Chandrashekar	Theory of Computer Science and Automata languages and computation	2 nd edition, PHI.
4	Daniel I.A. Cohen	Introduction to Computer Theory	John Wiley

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20MCS105: PROGRAMMING AND PROBLEM SOLVING USING PYTHON LAB

List of Programs

1. Write Python Program to reverse a number and also find the Sum of digits in the reversed number.
 Prompt the user for input.
2. Write Pythonic code to check if a given year is a leap year or not.
3. Write Pythonic code to check if a given year is a leap year or not.
4. Write Python code to determine whether the given string is a Palindrome or not using slicing.
5. Write Python program to add two matrices and also find the transpose of the resultant matrix.
6. Write Python program to swap two numbers without using Intermediate/Temporary variables.
 Prompt the user for input.
7. Consider a Rectangle Class and Create Two Rectangle Objects. Write Python program to
 to
 Check Whether the Area of the First Rectangle is Greater than Second by
 Overloading >
 Operator.
8. Write Python program to count the number of times an item appears in the list.
9. Write Python program to convert uppercase letters to lowercase and vice versa.
10. Write Python program to perform a linear search for a given Key number in the list and report
 report
 Success or Failure.
11. Write Python program to sort numbers in a list in ascending order using Bubble Sort
 by
 passing the list as an argument to the function call.
12. Write Python program to Calculate Area and Perimeter of different shapes using
 Polymorphism.

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20MCS106 : DATA STRUCTURES LAB

List of Programs

1. Java program to implement Stack operations using Arrays
2. Java program to implement Queue operations using Arrays
3. Java program to implement linked list operations using Arrays
4. Java Program to implement tree traversal techniques
5. Java program to convert infix expression to postfix expression
6. Java program to evaluate postfix expression
7. Java program to implement Binary search.
8. Java program to implement Selection sort
9. Java program to implement Insertion sort
10. Java program to implement quick sort
11. Java program to implement Merge Sort.

MCS201: DESIGN AND ANALYSIS OF ALGORITHMS

Details of the syllabus

it 1	<p>Introduction to Algorithm : Algorithm definition, properties, Different areas to study about Algorithms, Pseudo code expressions for an algorithm, Performance Analysis, Time Complexity & Space Complexity, Asymptotic notations</p> <p>Elementary Data Structures: Stacks and Queues, Trees: Terminology - Binary Trees, Dictionaries : Binary Search Trees, Heaps, Heapsort, Sets and disjoint set Union: Introduction - union and find operations. ; Graphs: Introduction - Definitions - Graph Representations.</p>
it 2	<p>Introduction to Divide and Conquer : Binary search, Binary search analysis, Quick sort, Quick sort analysis, Merge sort, Merge sort Analysis, Strassen's matrix multiplication, Finding Maximum and minimum.</p> <p>Greedy Method : Introduction, General method, Job sequencing with deadlines, single source shortest path problem, Optimal storage on tapes, Knapsack problem, Minimum cost spanning trees : Prim's Algorithm, Kruskal's Algorithm.</p>
it 3	<p>Dynamic Programming : Single source shortest path problem, Multi stage graphs, All pairs shortest path, Optimal Binary search tree, 0/1 Knapsack problem, Reliability design, Travelling person Problem, Flow shop scheduling.</p> <p>Basic Traversal and Search Techniques: Techniques for Binary Trees, Techniques for graphs: Breadth First Search and Traversal-Depth First Search; Connected Components and Spanning Trees -Bi-connected components and DFS</p>
it 4	<p>Introduction to Backtracking : General method, N-queens problem, sum of sub sets problem, Graph coloring, Hamiltonian cycles, Knapsack problem.</p> <p>Branch and Bound : The Method: Least Cost search -The 15 puzzle - control abstractions for LC search - Bounding - FIFO Branch and Bound - LC Branch and Bound; 0/1 knapsack problem: LC Branch and Bound solution - FIFO Branch and Bound solution; Traveling Sales person.</p>

it 5	NP-Hard and NP -complete problems : Basic concepts : Non deterministic algorithms -The classes NP hard and NP complex; Cook's theorem - NP hard graph problems : Clique Decision Problem -Node cover decision problem chromatic number decision problem - Directed Hamiltonian cycle - Traveling sales person decision problem - and/or graph decision problem; NP-hard scheduling Problems: scheduling identical processors - flow shop scheduling -job shop scheduling; NP-hard code generation problems: code generation with common sub expressions -Implementing parallel assignment instructions; Some simplified NP-hard problems.
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Text books

	Author	Title	Publisher
1	Sartaj Sahni	Fundamentals of Computer Algorithms.	2 nd Edition, University Press

Reference books

	Author	Title	Publisher
1	Anany Levitin	Introduction to the Design & Analysis of Algorithms	2 nd Edition, Pearson Education
2	I Chandra Mohan	Design and Analysis of Algorithms	PHI
3	Prabhakar Gupta and Vineet Agarwal	Design and Analysis of Algorithms	PHI
4	Parag Himanshu Dave	Design and Analysis of Algorithms	Pearson Education

20MCS202: SOFTWARE ENGINEERING

Details of the syllabus

Unit 1	Introduction to software Engineering- The Evolution Role of software, Software, Quality of Software, Software Evolution. Software Engineering Process Models- prescriptive models, waterfall model, Incremental model, RAD model, Evolutionary process model.
Unit 2	Software Architecture – Software Architecture, Data design, Architecture styles and patterns, Architectural design, mapping data flow into software architecture. Software Analysis Model- Requirements analysis, Data modeling concepts, Object-oriented modeling, Class- based modeling, flow-oriented modeling.
Unit 3	Software Design Engineering- Design within the context of software Engineering, Design process and quality, Design concepts, Design model, Pattern based software design. Software Testing Strategies – Static approach to software testing, Validation testing, System testing, Black-Box testing, White-Box testing, Object oriented testing models, Art of Debugging.
Unit 4	Software Metrics- Framework for product metrics, Metrics for analysis, Design, Source code, testing and maintenance, Metrics for process and project domains. Software Re-Engineering- Software Re-Engineering, Reverse Engineering, Restructuring, Forward engineering.
Unit 5	Project Organization & Responsibilities- , Project organizations, evolution of organizations. Process Automation- Automation building blocks, project environment. Project control & Process Instrumentation- The seven core metrics, Management indicators, Quality indicators, Life cycle expectations, Programmatic software metrics, Metrics automation, tailoring the process, Process discriminates.

Text books

	Author	Title
1	Roger S. Pressman	Software Engineering-A practitioner's Approach
2	Walker Royce	Software Project Management- A unified Framework

20MCS203: OPERATING SYSTEMS

Details of the syllabus

Unit 1	<p>Introduction: Where does an operating system fit in? : System Levels, What Operating Systems do? : Hardware Resources, Resource Management, Virtual Computers, A Virtual Computer: Virtual Processor, Virtual Primary Memory, Virtual Secondary Memory, Virtual I/O.</p> <p>The Hardware Interface: The CPU: General- Purpose Registers, Control Registers, Processor Modes, Instruction Set, Machine Instructions in C++ code, Memory and Addressing, Interrupts, I/O Devices: Disk Controller.</p>
Unit 2	<p>The Operating System Interface: What are System Calls? : How to Make a System Call, What is a System Call Interface?, An Example System Call Interface: System Call Overview, Hierarchical File Naming System, File and I/O System Calls, open Files, Examples of File I/O, Naming Operating System Objects, Devices as files: Unification of the File and Device Concepts, The Process Concept: Processes and programs, process Management System Calls, Communication between Processes: Communication-Related System Calls, Example of Interprocess Communication, UNIX-Style Process Creation, Standard Input and Standard Output: Communicating with Pipes, Naming of Pipes and Message Queues, Summary of System Call Interfaces.</p>
Unit 3	<p>Implementing Processes: The System Call Interface, Implementation of a Simple Operating System: Guide to the Code, The Architecture, Implementation of Processes: Process Creation, process States, Process Dispatching, Flow of Control Through the Operating System.</p>
Unit 4	<p>Memory Management: Levels of Memory Management, Linking and Loading a Process: Creating a Load Module, loading a Load Module, Allocating Memory in a Running Process,, Variations in Program Loading: Load Time Dynamic Linking, Run Time Dynamic Linking, Solutions to the Memory Management Design Problem: Static Division into a Fixed Number of Blocks, Buddy Systems, powers-of-two Allocation, Dynamic Memory Allocation, Keeping Track of the Blocks: The List Method, Keeping Allocated Blocks on the Block List, Examples of Dynamic Memory</p>

	<p>Allocation: Logical and Physical Memory, Allocating Memory to Processes, Static Memory Management.</p> <p>Virtual Memory: Fragmentation and Compaction, Dealing with Fragmentation: Separate code and Data Spaces, Segments Noncontiguous Address Spaces, page Tables in Hardware Registers, Page Tables in Memory, Using a Page Table Cache, Analysis Models of Paging with Caching, Memory Allocation with Paging, Terminology: Page and Page Frame, Page Tables, Paging Summary.</p>
Unit 5	<p>Virtual Memory Systems: Page Replacement, Global Page Replacement Algorithms: Measuring the Performance of a Page Replacement Algorithm, Optimal Page Replacement, Theories of Program paging Behavior, Random Page Replacement, First In First Out FIFO Page Replacement, Least Recently Used Page Replacement, Approximations of LRU, Clock Algorithms, Page Replacement Examples, Local Page Replacement Algorithms: What Is a Working Set?, Program Phases, Variable Resident Set Sizes, The Working Set Paging Algorithm, Approximating the Working Set, WSClock Paging Algorithm.</p>

Text books

	Author	Title	Publisher
1	Charles Crowley	Operating Systems: A Design-Oriented Approach	TATA MCGRA-HILL EDITION.

Reference books

	Author	Title	Publisher
1	Abraham Silberchatz, Peter B. Galvin, Greg Gagne	Operating System Principles	8th Edition, Wiley Student Edition.
2	Naresh Chauhan	Principles of Operating Systems	OXFORD University Press
3	Sumitabhadas	Unix Concept and application	----
4	YashwantKanetkar	Unix Shell Programming	----

20MCS204: DATABASE MANAGEMENT SYSTEMS

<p>Unit 1</p>	<p>Databases and Database Users: Introduction, Characteristics of the Database Approach, Actors on the Scene, Workers behind the scene, Advantages of the using the DBMS Approach.</p> <p>Database System Concepts and Architecture: Data Models, Schemas and Instances, Three Schema architecture and Data Independence, Database Languages and Interfaces, Centralized and Client/Server Architecture for DBMS, Classification of Database Management Systems.</p>
<p>Unit 2</p>	<p>Data Modeling Using the ER Model: Conceptual Data models, Entity Types, Entity Sets, Attributes and Keys, Relationship types, Relationship sets, roles and structural Constraints, Weak Entity types, Relationship Types of Degree Higher than Two, Refining the ER Design for the COMPANY Database.</p> <p>The Relational Algebra and Relational Calculus: Unary Relational Operations: SELECT and PROJECT, Relational Algebra Operations from set Theory, Binary Relational Operations: JOIN and DIVISION, Additional Relational Operations, Examples, The Tuple Calculus and Domain Calculus.</p> <p>The Enhanced Entity-Relationship Model: Sub classes, Super classes and Inheritance, Specialization and Generalization, Constraints and Characteristics of Specialization and Generalization</p>
<p>Unit 3</p>	<p>Functional Dependencies and Normalization for Relational Databases: Informal Design Guidelines for Relation Schemas, Functional dependencies, Normal Forms Based in Primary Keys, General Definitions of Second and Third Normal Forms, Boyce-Codd Normal Form, Multivalued Dependencies and Fourth Normal Form, Join Dependencies and Fifth Normal Form, Inclusion Dependencies.</p> <p>SQL-99: Schema Definition, Constraints, Queries and Views: SQL Data Definitions and Data Types, Specifying Constraints in SQL, Schema Change Statements on SQL, Basic Queries in SQL, More Complex SQL Queries, INSERT, DELETE and UPDATE statements in SQL, Triggers and Views.</p>
<p>Unit 4</p>	<p>Introduction to Transaction Processing Concepts and Theory: Introduction to</p>

	<p>Transaction Processing, Transaction and System Concepts, Desirable Properties of Transactions, Characterizing Schedules Based on Recoverability, Characterizing schedules Based on Serializability.</p> <p>Concurrency Control Techniques: Two Phase Locking Techniques for Concurrency Control, Concurrency Control Based on Timestamp Ordering, Multiversion Concurrency control techniques, Validation concurrency control Techniques.</p>
Unit 5	<p>Disk Storage, Basic File Structures and Hashing: Introduction, Secondary Storage Devices, Buffering of Blocks, Placing file Records on Disk, Operations on Files, Files of Unordered Records, Files of Ordered Records, Hashing Techniques, Other Primary File Organizations, Parallelizing Disk Access using RAID Technology.</p> <p>Indexing Structures for Files: Types of Single-Level Ordered Indexes, Multilevel Indexes, Dynamic Multilevel Indexes Using B-Trees and B⁺ Trees, Indexes on Multiple Keys, Other Types of Indexes.</p>

Text books

	Author	Title	Publisher
1	Elmasri.R and Navathe.S	Fundamentals of Database Systems.	Pearson Education (2007) Chapters: 1.1 to 1.6, 2, 13.1 to 13.10, 14, 3.1 to 3.6, 3.9, 4.1 to 4.5, 5, 6, 8, 10, 11, 17, 18.1 to 18.5, 25.1 to 25.3, 25.6

Reference books

	Author	Title	Publisher
1	Peter Rob, Carlos Coronel	Database Systems– Design, Implementation and Management	Eigth Edition, Thomson (2008)
2	C.J. Date, A.Kannan, S.Swamynathan	An Introduction to Database Systems	VII Edition Pearson Education (2006).
3	Raman A Mata – Toledo, Panline K. Cushman	Database Management Systems	Schaum’s Outlines, TMH (2007)
4	Steven Feuerstein	Oracle PL/SQL – Programming	10 th Anniversary Edition, OREILLY (2008)

20MCS206: Unix Operating Systems Lab

List of programs

1. Write programs using the following system calls of UNIX operating system:
fork, exec, getpid, exit, wait, close, stat, opendir, readdir
2. Write programs using the I/O system calls of UNIX operating system (open, read, write, etc)
3. Write C programs to simulate UNIX commands like ls, grep, etc.
4. Given the list of processes, their CPU burst times and arrival times, display/print the Gantt chart for FCFS and SJF. For each of the scheduling policies, compute and print the average waiting time and average turnaround time.
5. Given the list of processes, their CPU burst times and arrival times, display/print the Gantt chart for Priority and Round robin. For each of the scheduling policies, compute and print the average waiting time and average turnaround time.
6. Developing Application using Inter Process communication (using shared memory, pipes or message queues)
7. Implement the Producer – Consumer problem using semaphores (using UNIX system calls).
8. Implement some memory management schemes – I
9. Implement some memory management schemes – II
10. Implement any file allocation technique (Linked, Indexed or Contiguous)

20MCS207: Database Management Systems Lab

Cycle-I: Aim: Marketing company wishes to computerize their operations by using following Tables.

Table Name: Client- Master

Description: Used to store client information

Column Name	Data Type	Size	Attribute
CLIENT_NO	Varchar2	6	Primary key and first letter must start with 'C'
NAME	Varchar2	20	Not null
ADDRESS 1	Varchar2	30	
ADDRESS S	Varchar2	30	
CITY	Varchar2	15	
PINCODE	Varchar2	8	
STATE	Varchar2	15	
BAL_DUE	Number	10,2	

Table Name: Product_Master

Description: Used to store product information

Column Name	Data Type	Size	Attribute
PRODUCT_NO	Varchar2	6	Primary key and first letter must start with 'P'
DESCRIPTION	Varchar2	15	Not null
PROFIT_PERCENT	Number	4,2	Not null
UNIT_MEASUE	Varchar2	10	
QTY_ON_HAND	Number	8	
REORDER_LVL	Number	8	
SELL_PRICE	Number	8, 2	Not null, cannot be 0
COST_PRICE	Number	8,2	Not null, cannot be 0

Table Name: Salesman_master

Description: Used to store salesman information working for the company.

Column Name	Data Type	Size	Attribute
SALESMAN_NO	Varchar2	6	Primary key and first letter must start with 'S'
SALESMAN_NAME	Varchar2	20	Not null
ADDRESS1	Varchar2	30	
ADDRESS2	Varchar2	30	
CITY	Varchar2	20	
PINCODE	Number	8	
STATE	Vachar2	20	
SAL_AMT	Number	8,2	Not null, cannot be 0

TGT_TO_GET	Number	6,2	Not null, cannot be 0
YTD_SALES	Number	6,2	Not null
REMARKS	Varchar2	20	

Table Name: SALES-ORDER

Description: Used to store client's orders

Column Name	Data Type	Size	Attribute
ORDER_NO	Varchar2	6	Primary key and first letter must start with 'S'
CLIENT_NO	Varchar2	6	Foreign Key
ORDER_DATE	Date		
DELY_ADDRESS	Varchar2	25	
SALESMAN_NO	Varchar2	6	Foreign Key
DELY_TYPE	Char	1	Delivery: part(p)/ full(f) and default 'F'
BILL_YN	Char	1	
DELY_DATE	Date		Can't be less than order date
ORDER_STATUS	Varchar2	10	Values ("In Process", "Fulfilled", "Back Order", "Cancelled.

Table Name: SALES_ORDER_DETAILS

Description: Used to store client's order with details of each product ordered.

Column Name	Data Type	Size	Attribute
ORDER_NO	Varchar2	6	Primary key references SALES_ORDER table
PRODUCT_NO	Varchar2	6	Foreign Key references SALES_ORDER_table
QTY_ORDERED	Number	8	
QTY_DISP	Number	8	
PRODUCT_RATE	Number	10,2	Foreign Key

Solve the following queries by using above tables.

1. Retrieve the list of names, city and the state of all the clients.
2. List all the clients who are located in 'Mumbai' or 'Bangalore'.
3. List the various products available from the product_master table.
4. Find the names of sales man who have a salary equal to Rs.3000.
5. List the names of all clients having 'a' as the second letter in their names.
6. List all clients whose Bal due is greater than value 1000.
7. List the clients who stay in a city whose first letter is 'M'.
8. List all information from sales-order table for orders placed in the month of July.
9. List the products whose selling price is greater than 1000 and less than or equal to 3000.
10. Find the products whose selling price is greater than 1000 and also find the new selling price as original selling price 0.50.
11. Find the products in the sorted order of their description.
12. Find the products with description as '540HDD' and 'Pen drive'.
13. Count the total number of orders.
14. Print the description and total qty sold for each product.
15. Calculate the average qty sold for each client that has a maximum order value of 15,000.

16. Find all the products whose quantity on hand is less than reorder level.
17. List the order number and day on which clients placed their order.
18. Find out the products and their quantities that will have to deliver in the current month.
19. Find the names of clients who have placed orders worth of 10000 or more.
20. Find the client names who have placed orders before the month of June,2008.

Cycle-II

Aim: A manufacturing company deals with various parts and various suppliers supply these parts. It consists of three tables to record its entire information. Those are as follows.

Supplier (Supplier_No, Sname, City, status)

Part(Part_no, pname, color, weight, city, cost)

Shipment (supplier_No, Part_no, city)

JX(project_no, project_name, city)

SPJX (Supplier_no, part_no, project_no, city)

1. Get supplier numbers and status for suppliers in Chennai with status > 20.
2. Get project names for projects supplied by supplier S.
3. Get colors of parts supplied by supplier S₁.
4. Get part numbers for parts supplied to any project in Mumbai.
5. Find the id's of suppliers who supply a red or pink parts.
6. Find the pnames of parts supplied by London supplier and by no one else.
7. Get the names of the parts supplied by the supplier 'Mart' and 'Miller'.
8. Get supplier names for suppliers who do not supply part P₂.
9. Get all pairs of supplier numbers such that the suppliers concerned are "colocated".
10. Get suppliers names for the suppliers who supply at least one red part.

Cycle –III Employee Database

Aim: An enterprise wishes to maintain a database to automate its operations. Enterprise divided into a certain departments and each department consists of employees. The following two tables describes the automation schemas.

Emp(Empno, Ename, Job, Mgr, Hiredate, Sal, Comm, Deptno)

Dept(Deptno, Dname, Loc)

1. List the details of employees who have joined before the end of September' 81.
2. List the name of the employee and designation of the employee, who does not report to anybody.
3. List the name, salary and PF amount of all the employees (PF is calculated as 10% of salary)
4. List the names of employees who are more than 2 years old in the organization.
5. Determine the number of employees, who are taking commission.
6. Update the employee salary by 20% , whose experience is greater than 12 years.
7. Determine the department does not contain any employees.
8. Create a view, which contains employee name and their manager names working in sales department.
9. Determine the employees, whose total salary is like the minimum salary of any department.
10. List the department numbers and number of employees in each department.
11. Determine the employees, whose total salary is like the minimum salary of any department.

12. List average salary for all departments employing more than five people.
13. Determine the names of employees, who take highest salary in their departments.
14. Determine the names of employees, who earn more than their managers.
15. Display ename, dname, even if no employee belongs to that department (use outer join)

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