

**A.G&S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE VUYYURU, KRISHNA Dt. A.P.(Autonomous)**
Accredited by NAAC with “A” Grade



DEPARTMENT OF ZOOLOGY

MINUTES OF BOARD OF STUDIES

B.Sc. AQUACULTURE (industrial Fisheries)

16-10-2019

EVEN SEMESTER



2

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 10.30 AM on 16-10-2019 in the Department of Zoology.

Smt.D.A. Kiranmayee. ...

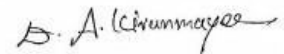
Presiding

Members Present:

- 1) S. Aruna Kiranmayee 16/10/19 Chair person Head, Department of Zoology, A.G&S.G.S Degree College of Vuyyuru-521165.
(Smt. D.A.Kiranmayee.)
- 2) J.N. Navarene Lavanya Latha 16/10/19 University Nominee Dr. J.N.Lavanya Latha, Krishna University, Machilipatnam.
(Dr.J.N.Lavanya Latha.)
- 3) K. Daniel 16/10/19 Academic Council Nominee Head, Department of Zoology, JKC College, Guntur.
(Dr. K.Daniel.)
- 4) B. Elia 16/10/19 Academic Council Nominee Head, Department of Zoology, Gov. Degree College, Pitapuram.
(B.Elia.)
- 5) M. Lakshmi Priyanka 16/10/19 Member Lecturer in Zoology, A.G&S.G.S Degree College Vuyyuru-521165.
(kum.M.Lakshmi Priyanka.)
- 6) B. Appala Naidu 16/10/19 Industrialist Asst. Project Manager, RGCA Manikonda.
(B. Appala Naidu.)
- 7) Ch. Chiranjeevi 16/10/19 Student Represent P.hd -Research Scholar, Dept.of Botany & Microbiology, Acharya Nagarjuna University, Guntur.
(Ch.Chiranjeevi.)

Agenda for B.O.S Meeting.

1. To frame the syllabus for II Semester of B.Sc. Aquaculture for the academic year 2019-2020.
2. To recommend the syllabi (Theory & Practical), Model question paper for II Semester of I B.Sc. Aquaculture (A.B.C) for the academic year 2019-2020.
3. To recommend the Model question paper and Blue print of II semester of I, B.Sc. Aquaculture (A.B.C.) for the academic year 2019-2020.
4. To recommend the teaching and evaluation methods to be followed under Autonomous status.
5. Any other matter.



Chairman.

RESOLUTIONS

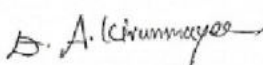
1. It is resolved to implement the new courses for II Semester of B.Sc. Aquaculture
2. It is resolved to implement the framed syllabi (Theory & Practical), model question paper of II Semester of I B.Sc. Aquaculture (A.B.C) under Choice Based Credit System (CBCS) for the academic Year 2019 – 2020.
3. It is resolved to follow the Model question paper and Blue print of II semester of I B.Sc. (A.B.C.) for the academic year 2019-2020.
4. It is resolved to continue the following teaching & evolution methods for the Academic year 2019-20.
- 5 Any other matter.

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, 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, B.Sc (A.B.C).
- **Semester – End Examination:**
- The maximum mark for I (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).



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

Aquaculture

Class: I B.Sc .(ABC)

Credits: 3

Title of the paper: **Biology of fin fish & shell fish**

60 hrs.(4hrs/week)

Semester – II

PAPER-II

w.e.f. 2019-2020

(Code: Aqu-201C)

Max.Marks : 70

Objective of the course: To introduce the Biology of fin fish & shell fish. General characters, Classification, growth and Development crustacean shellfish

Course outcomes:

1. Understand the characters and classification of cultivable Fin and Shell fish and commercial importance of crustaceans and Fish.
2. Gain Knowledge of feeding habits, gut content analysis and growth factors in fishes.
3. Understand and learn breeding in fishes, method of induced breeding in fishes.
4. To create awareness on parental care of Fishes and embryonic and larval development and environmental factors affecting development of major aquaculture organisms.
5. Acquire knowledge about Endocrine system in fishes.

UNIT- I: General character & Classification of Cultivable fin Shell fish

- 1.1 General Characters and classification of fishes & crustaceans up to the level of Class
- 1.2 Fish and Crustaceans of commercial importance
- 1-3 Sense organs of fishes and crustaceans.
- 1.4 Specialized organs in fishes – electric organ, venom and toxins
- 1.5 Buoyancy in fishes- swim bladder and mechanism of gas secretion

UNIT- II: Food, Feeding and Growth

- 2.1 Natural fish food, feeding habits, feeding intensity, stimuli for feeding, utilization of food, gut content analysis, forage ratio
- 2.2 Principles of Age and growth determination; growth regulation, Growth rate measurement– scale method, otolith method, skeletal parts as age indicators
- 2.3 Length-frequency method, age composition, age-length keys, absolute and specific growth, back calculation of length and growth, annual survival rate,
- 2.4 Length-weight relationship.

UNIT- III: Reproductive Biology

- 3.1 Breeding in fishes, breeding places, breeding habits & places, breeding in natural environment and in artificial ponds, courtship and reproductive cycles
- 3.2. Induced breeding in fishes
- 3-3 Breeding in shrimp, oysters, mussels, clams, pearl oyster, pila, and cephalopods.

UNIT- IV: Development

- 4.1. Parental care in fishes, ovo-viviparity, oviparity, viviparity, nest building and brooding
- 4.2 Embryonic and larval development of fishes
- 4.3 Embryonic and larval development of shrimp, crabs and molluscs of commercial importance
- 4.4 Environmental factors affecting reproduction and development of cultivable aquatic fin & shell fish

UNIT- V: Hormones & Growth.

- 1.1 Endocrine system in fishes.
- 1.2 Neurosecretory cells, androgenic gland, ovary, chromatophores,
- 1.3 Molting, molting stages, metamorphosis in crustacean shellfish

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Krishna Dt. A.P. (Autonomous)

Semester –II
Model Question Paper

w.e.f. 2019-2020

Title of the paper: **Biology of fin fish & shell fish**

Time: 3hrs.

Code – AQU-201C

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. Writethegeneralcharactersofthefishes?
2. Explaintheelectricorganinfishes?
3. writethedefinitionanddifferenttypesofnaturalfishfeeding?
4. Definethegrowthratemeasurementinfish?
5. Whatisthebreeding?writethebreedinginnaturalenvironment?
6. What is nestbuilding?
7. Explain the structure of fish ovary?
8. pearl oyster

Section – B

5 x 10 =50.

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

9. Definethe“fishgutcontentanalysis”?
- 10.Explaintheinducedbreedinginfishesanddrawthediagram?
11. Explain about the Breeding in shrimps
12. Explain about parental care of fishes?
13. Explain the environmental factors affecting reproduction of fin fishes?
- 14 Explain the fish endocrinesystem?
- 15 Explain about Molting stages of crustaceans

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Krishna Dt. A.P. (Autonomous)

Semester - II

Guide lines to the Paper Setter.

W.e.f. 2019-2020

Title of the paper: Biology of fin fish & shell fish.

Code – AQU-201C

Time: 3hrs.

Max. Marks: 70.

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.

	Section	UNIT-I	UNIT-II	UNIT-II	UNIT-IV	UNIT-V
5 Marks Questions	A	2	2	1	2	1
10 Marks Questions	B	1	1	2	2	2
Weightage		20	20	25	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, VUYYURU-
521165, KRISHNA Dt.,A.P. (AUTONOMOUS)

AQUACULTURE
PRACTICAL - II

w.e.f. 2019-2020

.Code :AQU- 201P

MAX.MARKS : 50.

(2hrs/week)

SYLLABUS]

1. Study of mouth parts in herbivorous and carnivorous fishes
2. Comparative study of digestive system of herbivorous and carnivorous fishes
3. Length-weight relationship of fishes
4. Gut content analysis in fishes and shrimp
5. Mouth parts and appendages of cultivable prawns, shrimps and other crustaceans
6. Study of eggs of fishes, shrimps, prawns and other crustaceans
7. Study of oyster eggs
8. Embryonic and larval development offish
9. Study of gonadal maturity and fecundity in fishes and shellfish
10. Observation of crustacean larvae
11. Study of nest building and brooding offishes

PRESCRIBED BOOK(S)

Bone Q et al., 1995. Biology of fishes, Blackie academic & professional, LONDON
1.14 Saxena AB 1996. Life of Crustaceans. Anmol Publications Pvt. Ltd., New Delh

REFERENCES:

Tandon KK & Johal MS 1996. Age and Growth in Indian Fresh Water Fishes.
Narendra Publishing House, New Delhi.
Raymond T et al., 1990. Crustacean Sexual Biology, Columbia University Press, New York

Guiland J.A (ed) 1984. Penaeid shrimps- Their Biology and Management. 1.18 Barrington
FJW 1971. Invertebrates: Structure and Function. ELBS

1.19 Parker F & Haswell 1992. The text book of Zoology, Voll. Invertebrates (eds. Marshal
AJ & Williams). ELBS & Mc Millan & Co.

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

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

Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF BOTANY

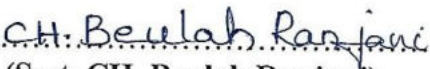

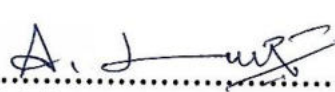

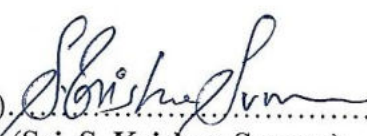
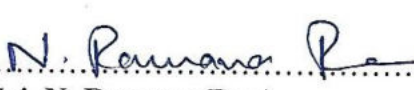

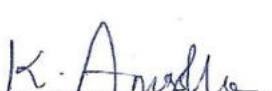
MINUTES OF BOARD OF STUDIES

EVEN SEMESTER

15-10-2019

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 15-10-2019 in the Department of Botany.

Members Present:-

- 1)  Chairman
(Smt. CH. Beulah Ranjani) Head, Department of Botany
AG & SG S Degree College of Arts & Science
Vuyyuru-521165.
- 2)  University
(Smt. Dr. L. Suseela) Nominee Department of Biotechnology &
Head (I/c) Botany,
Krishna University, Machilipatnam.
- 3)  Academic
(Sri. Dr. A. Srinivas Rao) Council Nominee Lecture in Botany,
Govt. Degree College Mandapeta,
East Godavari.
- 4)  Academic
(Smt. N. Manimala) Council Nominee Head, Department of Botany
Govt. Degree College Chinthalapudi,
West Godavari.
- 5)  Industrialist.
(Sri. S. Krishna Suman) Natural farming.
yakamuru
Vuyyuru, Krishna d.t
- 6)  Member
(Sri. N. Ramana Rao) Ad hoc Lecturer in Botany
AG & SGS Degree College of Arts &
Science (Autonomous), Vuyyuru-521165.
- 7)  Member
(Sri. E. Ganesh) Ad hoc Lecturer in Botany
AG & SGS Degree College of Arts &
Science (Autonomous), Vuyyuru-521165.
- 8)  student representative
(Miss K. Anusha MSc) Lecturer in chaitanya college,
Vuyyuru.

Agenda for B.O.S Meeting:

1. To recommend the syllabi (Theory & Practical), Model question paper & Guide lines for IISemesters of I B.Sc (BZC),ABC in the academic year 2019-20.
2. To recommend the syllabi (Theory & Practical), Model question paper& Guide lines for Semesters IVof II B.Sc (BZC),ABC in the academic year 2019-20.
3. To recommend the syllabi (Theory & Practical), Practical syllabus, Model question paper for General elective –A and Cluster elective C to the VI Semester of III B. Sc (BZC) for the academic year 2019-20.
4. To recommend the Guide lines to be followed by the question papers setters in Botany for II,,IV,VI Semester –End exams.
5. To continue a certificate course - Mushroom culture for II Year students in this academic year of 2019-20.
6. To recommend the teaching and evaluation methods to be followed under Autonomous statues.
- 7.Any other matter.

RESOLUTIONS

1. It is resolved to continue the same syllabi (Theory & Practical), model question paper & guide lines to be followed by the question paper setters of Botany of II of I B.Sc(B.Z.C) under Choice Based Credit System (CBCS) approved by the Academic Council of 2019-20.
2. It is resolved to continue the same syllabi (Theory & Practical), model question paper & guide lines to be followed by the question papers under Choice Based Credit System (CBCS) setters of Botany of IV semesters of II B.Sc. (B.Z.C) approved by the Academic Council of 2019-20.
3. It is resolved to follow Elective-AC (Plant tissue culture and its Biotechnological applications) and Cluster –A (plant Diversity and human welfare, Ethno Botany and Medicinal Botany, Pharmacognosy and phyto chemistry.) in VI Semester from the Academic year 2019-20.
In Ethno Botany and Medicinal Botany topic Medico ethanobotanical sources of India is added.
4. It is resolved to Continue the same Blue prints of II,IV,& VI Semesters of B. Sc Botany for the Academic year 2019-20.
5. It is resolved to implement certificate course for II Year students in the Academic year 2019-20.
6. It is resolved to continue the following teaching and evolution methods for the Academic year 2019-20.
7. Any other matter.

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:

- There are two components in the Valuation and Assessment of a student – Internal Assessment (IA) and Semester Examinations (SE).(For the Batch of Students Admitted from 2019-20 – UG).

Internal Assessment (IA):

- The maximum mark for IA is 30 and SEM is 70 for theory; and for practical papers 50.
- 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.
- 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 /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.
- The semester examination will be of 3 hours with maximum 70 marks.
- 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 & Foundation course 2 hours irrespective of the number of credits allotted to it.
- 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.
- 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 maximum marks for each Paper shall be 100.

Evaluation of a student is done by the following procedure:

I. Internal Assessment Examinations:

- Out of maximum 100 marks in each paper, 30 marks shall be allocated for internal assessment.
- Out of these 30 marks, 15 marks are allocated for announced tests. 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 for seminars & remaining 5 marks for assignments to the Semesters For the III, IV, V & VI semesters it is resolved to continue the same as approved by Academic Council in 2019-20.

II. Semester-End Examinations:

- The maximum marks for I & II B.Sc (BZC) Semester-End examinations shall be 70 marks and duration of the examination shall be 3 Hours.
- The maximum marks for III B.Sc (BZC) Semester-End examinations 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 end of I, II, III, IV, V & VI semesters.
- Discussed and recommended for organizing Seminars, Guest lectures, Work-shops to upgrade the Knowledge of students, for the approval of the Academic Council.

CH. Beulah Rajani
Chairman

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

An autonomous college in the jurisdiction of Krishna University

BOTANY	BOT - 201C	w.e.f.2019-20	B. Sc. (BZC)
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I B. Sc - BOTANY SYLLABUS

PAPER CODE : BOT – 201C

SEMESTER- II

Paper II: Diversity of Archegoniate & Plant Anatomy

Total hours of teaching 60 hrs @ 4 hrs per week

Credits: 3

UNIT – I: BRYOPHYTA (14 hrs)

- 1. Bryophyta:** General characters and classification (up to classes only).
2. Structure, reproduction and Life history of Marchantia and Polytrichum.
3. Evolution of Sporophyte in Bryophytes.

UNIT - II: PTERIDOPHYTA (14 hrs)

- 1. Pteridophyta:** General characters and Classification (up to classes only).
2. Structure, reproduction and life history of Lycopodium and Marsilea.
3. Heterospory and seed habit
4. Stelar Evolution in Pteridophytes

UNIT – III: GYMNOSPERMS (12 hrs)

- 1. Gymnosperms:** General characters and classification (up to classes only).
2. Morphology, Anatomy, reproduction and life history of Pinus and Gnetum.

UNIT – IV: Tissues and Tissue systems (10 hrs)

1. Tissues: Meristematic and permanent tissues (Simple and Complex).
2. Shoot apical meristems and its histological organization.
3. Root apical meristems and its histological organization.

UNIT –V: Secondary growth. (10 hrs)

1. Anomalous secondary growth in Dracaena, Boerhaavia and Bignonia.
2. Wood structure- general account, Study of local timbers Teak, Rosewood, Red sanders and Terminalia tomentosa.

I B. Sc - BOTANY Model Question Paper

Paper Code: BOT - 201

PAPER-II

SEMESTER- II

Paper title: Diversity of Archegoniate & Plant Anatomy

Time: 3 Hours

Max. Marks: 70

SECTION-A

Answer any **four** of the following question

4x5=20Marks

(Draw diagrams wherever necessary)

1. Gemma Cup.
2. Cone of Lycopodium
3. Pinus ovuliferous scale
4. Collenchyma.
5. Tunica – Corpus theory.
6. Phloem.
7. Botanical name, family and uses of Teak.
8. Botanical name, family and the properties of wood of Red sanders.

SECTION-B

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

5x10=50Marks

9. Write an essay on Evolution of sporophyte in Bryophytes.
10. Describe Sexual reproduction in Polytrichum.
11. Write an essay on the Stelar evolution in Pteridophytes.
12. Describe the structure of the sporocarp of Marselia.
13. Describe the internal structure of the Pinus needle & Mention its xerophytic characters.
14. Describe the female gametophyte in Gnetum.
15. Describe various theories regarding the organization of Root apex.
16. Give an account of the Anomalous secondary growth in Boerhaavia.

Guide lines for paper setter: (for Paper II – BOT - 201C) w.e.f. 2019-20.

1. In **section A**: Unit I, II & III must carry **one** question from each Unit, Unit IV must carry **Three** questions and Unit V must carry **two** questions.
2. In **section B**: Set minimum **two** questions from Unit I, II & III. **One** question each from Unit IV and Unit V.
3. See the following table and Model paper for marks distribution.
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		
	05		20		25
Unit - II	1		2		
	05		20		25
Unit – III	1		2		
	05		20		25
Unit – IV	3		1		
	15		10		25
Unit – V	2		1		
	10		10		20
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		5		
	(4X 5) = 20		(5 X 10) = 50		70

INTERNAL EXAMS – 30 Marks

(20 marks for unit tests, 5marks for attendance, 5marks for Seminars).

**I B.Sc SEMESTER - II
BOTANY PRACTICAL SYLLABUS**

Paper - II: Diversity of Archegoniate & Plant Anatomy **Paper - 201C (P)**
Total hours of laboratory Exercises 30 hrs @ 2 per week Credits - 2

I. Morphology (vegetative and reproductive structures), anatomy of the following:-

1. **Bryophyta** : Marchantia and Polytrichum.
2. **Pteridophyta**: Lycopodium and Marsilea.
3. **Gymnosperms** : Pinus and Gnetum.

II. Anatomy:-

1. Demonstration of double staining technique.
2. Tissue organization in root and shoot apices using permanent slides.
3. Preparation of double staining slides.
4. Anomalous secondary structure (Examples as given in theory syllabus).
5. Microscopic study of wood in T.S., T.L.S. and R.L.S.
6. Field visits.

**I B.Sc., SEMESTER-II: BOTANY PRACTICAL MODEL PAPER II
II P: Diversity of Archegoniate & plant Anatomy**

- Q.1. Cut T.S of the **material** – **A** Identify given reasons draw labeled diagrams.
Leave the preparation for evaluation. **4 marks**
2. Cut T.S of the **material** –**B** Identify given reasons draw labeled diagrams.
Leave the preparation for evaluation. **5 Marks**
3. Cut T.S of the **material** -**C** Identify given reasons draw labeled diagrams.
Leave the preparation for evaluation. **5 Marks**
4. Write a critical notes and Identify - **D, E, and F** **(3x3) = 9 Marks**
5. Viva- Voce (Any **2** simple questions from syllabus) - **2 Marks**
- Internal Assessment**25 Marks.**

Total : 50 Marks

Key:

- A. Bryophyta/ Pteridophyta material
- B. Gymnosperm material.
- C. Anatomy material.
- D. Whole specimen or permanent slide of Bryophyta/ Pteridophyta
- E. Whole specimen or permanent slide of Gymnosperm.
- F. Whole specimen or permanent slide of wood.

I B.Sc., SEMESTER-II: BOTANY PRACTICAL MODEL PAPER II
II P: Diversity of Archegoniate & plant Anatomy

A. Bryophyta / Pteridophyta - Section cutting..... (For A (Slide 2 marks, diagrams-1 marks, Identification-1 marks)	4 Marks
B. Gymnosperms - Section cutting.....	5 Marks
C. Anatomy - Section cutting..... (For B and C (Slide 3 marks, diagrams-1 marks, Identification-1 marks)	5 Marks
D. Bryophyta / Pteridophyta (From Bryophyta if “A” Material is from Pteridophyta.....Vice versa)	3 Marks
E. Gymnosperms.....	3Marks
F. Anatomy.....	3Marks
(For D, E and F = Identification -1Mark , Notes -1Mark, Diagram – 1Mark).	
G. Viva.....	2 marks

Total: **25 Marks**

Internal Assessment

a) Record	10Marks
b) Submission of Chart / Model	5 Marks
c) Attendance	5 Marks
d) Internal Practical Exam	5 Marks

Total : **25 Marks**

Total: 50 Marks

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

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BOTANY	BOT-401C	w.e.f. 2019-20	B. Sc. (BZC)
SEMESTER - IV	II B. Sc - BOTANY SYLLABUS		PAPER – IV

Plant Embryology and Plant Metabolism

Hours: 60 @ 4 hrs per week

UNIT – I: EMBRYOLOGY (12hrs)

1. Introduction: History and Importance of Embryology.
2. Anther structure, Microsporogenesis and development of male gametophyte.
3. Ovule structure and types; Megasporogenesis; Monosporic; Bisporic and Tetrasporic types of female gametophyte / embryosac development.
4. Pollination -Types, Fertilization.

UNIT –II: EMBRYOLOGY AND PALYNOLOGY (12 hrs)

1. Endosperm Development and types.
2. Embryo - development and types.
3. Polyembryony and Apomixis - an outline.
4. Palynology: Principles and applications.

UNIT –III: PLANT METABOLISM- I (12 hrs)

1. Photosynthesis: Electromagnetic spectrum, absorption and action spectra; Red drop and Emerson enhancement effect, concept of Z scheme in photosystems, Photosynthetic pigments, mechanism of photosynthetic electron transport and evolution of oxygen, photo phosphorylation, carbon assimilation pathways: C₃, C₄ & CAM and Photorespiration.
2. Translocation of organic substances: Mechanism of phloem transport, source-sink relationships.

UNIT –IV: PLANT METABOLISM- II (12 hrs)

1. Respiration: Aerobic and Anaerobic, Glycolysis, Krebs cycle, electron transport system, mechanism of oxidative phosphorylation, pentose phosphate pathway.
2. Lipid Metabolism: Structure and functions of lipids, conversion of lipids to carbohydrates, Beta-oxidation.

UNIT –V: GROWTH AND DEVELOPMENT (12 hrs)

1. Growth and development: Definition, phases and kinetics of growth, Physiological effects of phytohormones - auxins, gibberellins, cytokinins, ABA and ethylene
2. Physiology of flowering and photoperiodism, role of phytochrome in flowering.
3. Stress Physiology: Concept and plant responses to water, salt and temperature stresses.

BOTANY	BOT- 401	w.e.f. 2019-20	B. Sc. (BZC)
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II B. Sc – BOTANY Model Question Paper

Paper Code: BOT - 401

SEMESTER- IV

PAPER-IV: Plant Embryology and Plant Metabolism

Time: 3 Hours

Max. Marks: 70

SECTION-A

Answer any **four** of the following questions
(Draw diagrams wherever necessary)

4x5=20Marks

1. Microsporogenesis.
2. Allogamy.
3. Helobial endosperm.
4. Emerson enhancement effect.
5. Anaerobic respiration.
6. Ethylene.
7. Photoperiodism.
8. Phytochrome.

SECTION-B

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

5x10=50Marks

(Draw diagrams wherever necessary)

9. What is an Embryosac? Describe any five of the tetrasporic type of Embryosac developments.
10. Give an account of Polyembryony.
11. Write an essay on the Principles and applications of Palynology.
12. Describe the carbon assimilation pathway in C4 plants.
13. Write an essay on the Translocation of organic substances in higher plants.
14. Describe various reactions of Krebs cycle.
15. Write an essay on various types of Lipids.
16. Give an account of Auxins and Gibberellins.

Guide lines for paper setter: (for Paper IV – BOT- 401) w.e.f. 2019-20

- In **section A:** Unit II, III & IV must carry **one** question from each Unit, Unit I must carry **two** questions and Unit V must carry **three** questions.
- In **section- B:** Set minimum **two** questions from Unit II, III & IV.
One question each from Unit I and Unit V.
- 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	1		2		
	05		20		25
Unit – V	3		1		
	15		10		25
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

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

II B. Sc – BOTANY SEMESTER- IV.

PRACTICAL SYLLABUS

PAPER- IV - Plant Embryology and Plant Metabolism

(BOT – 401)

Total hours of laboratory Exercises 45 hrs @ 3 per week . w.e.f. 2019-20

Suggested Laboratory Exercises:

1. Structure of pollen grains using whole mounts (Catharanthus, Hibiscus, Acacia, Grass).
2. Demonstration of Pollen viability test using in- vitro germination (Catharanthus).
3. Study of ovule types and developmental stages of embryo sac using permanent slides / Photographs.
4. Structure of endosperm (nuclear and cellular); Developmental stages of dicot and monocot Embryos using permanent slides / Photographs.
5. Isolation and mounting of embryo (using Symopsis / Senna / Crotalaria).

Major experiments:

6. Separation of chloroplast pigments using paper chromatography technique.
7. Rate of photosynthesis under varying CO₂ concentration.
8. Effect of kind of light intensity on oxygen evolution during photosynthesis using Wilmontt' bubbler.
9. Titratable acidity estimation of Lemon or Tamarind leaves.

Minor experiments:

10. Release of CO₂ in Aerobic respiration.
11. Demonstration of the process of fermentation using Kuhne's fermentation vessel.
12. Demonstration of Phototropism.
13. Measuring the Plant growth using Arc Auxanometer.

1. Conduct experiment 'A', write down the procedure and conclusions.

Tabulate the results if any.....11M

2. Write the salient features of experiment 'B' with the help of neat labelled diagram. 05M

3. Identify and write notes on 'C, D & E' (3X3M) 09M

Total 25M

Scheme of valuation

1. 'A' –Physiology –major experiment

Setting and conducting of the experiment 6M, Procedure 3M, Conclusion1M, tabulation1M.

= 11M

2. 'B'- Physiology –minor experiment Salient features 3M, Diagram2M

= 05M

3. Identify C, D and E (3X3)

(Identification - 1 + Diagram-1 + Notes- 1 =Total = 3marks for each)

= 09

'C' from Anther T.S / Pollen grains.

'D' - Slide from types of Ovules.

'E'– Slide from Embryosacs / Embryos.

(Total.....25M)

Internal:

a) Record10M

b) Internal Practical Exam/ Self study project report. 08M

c) Attendance 05M

d) Assignment 02M

Grand Total 50M

BOTANY	BOT-601 (GE)	2019-2020	B.Sc. (BZC)
PAPER – VII	ELECTIVE-C	SEMESTER- VI	
Plant tissue culture and its Biotechnological applications			
Total hours of teaching 45hrs @ 3hrs per week			Credits: 3

Unit I: PLANT TISSUE CULTURE – 1

(12hrs)

1. History of plant tissue culture research - basic principles of plant tissue callus culture, meristems culture, organ culture, Totipotency of cells.
2. Sterilization procedures, culture media composition and preparations of explants. Murashige and Skoog's (MS medium), Cell and protoplast culture.
3. Somatic Hybrids and Cybrids (out lines), Artificial Seeds, Somaclonal variations. Applications of Tissue culture (Brief account).

UNIT-II: Plant Tissue culture -2

(12hrs)

1. Endosperm culture – Embryo culture -culture requirements – applications, embryo rescue technique.
2. Cryopreservation; Germ plasm conservation.

Unit III: Recombinant DNA technology

(12hrs)

1. r-DNA technology: Steps in r-DNA technology and tools.
2. Cloning Vectors: Prokaryotic (pBR322, Ti plasmid and Lambda phage, Eukaryotic Vectors (YAC and briefly PAC).
3. Gene cloning (Bacterial Transformation and selection of recombinant clones, PCR Mediated gene cloning)

Unit IV: Methods of gene transfer

(12hrs)

1. Methods of gene transfer- Agrobacterium-mediated, direct gene transfer By Electroporation, Microinjection, Micro projectile bombardment.
2. Selection of transgenics– selectable marker and reporter genes (Luciferase, GUS, GFP).

Unit V: Applications of Biotechnology

(12 hrs)

1. Applications of Plant Genetic Engineering – crop improvement, herbicide resistance, insect resistance, virus resistance.
2. Genetic modification – transgenic plants for pest resistant (Bt-cotton); herbicide resistance (Round Up Ready soybean); improved agronomic traits flavrSavr tomato, Golden rice.

Plant tissue culture and its Biotechnological applications

SEMESTER- VI

ELECTIVE-C

PAPER – VII

Time: 3 Hours

Paper code: BOT-VII C

Max. Marks: 75

SECTION-A

Answer any five of the following question

5x5=25M.

(Draw diagrams wherever necessary)

1. Organ culture.
2. Somatic hybrids.
3. Cryopreservation.
4. Application of tissue culture.
5. Restriction Endonuclease.
6. Bacterial transformation.
7. GUS.
8. Bt-Cotton.

SECTION-B

Answer any Five of the following questions.

5x10=50M.

(Draw diagrams wherever necessary)

9. Describe the composition and preparation of different culture media.
10. Explain the callus sub-culture and their growth and measurement.
11. Give an account on secondary metabolites.
12. Write notes on endosperm culture and their applications.
13. Explain the PCR mediated gene cloning.
14. Explain the various types of cloning vectors.
15. Write about methods of gene transfer techniques.
16. Write an essay on application of Biotechnology in the field of medicine and industry.

Guide lines for paper setter: (for Paper VII -BOT-601) W.e.f. 2019-20.

1. In Section A: Unit I,III,IV must carry Two question from each unit. Unit II, 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	1		2		
	5		20		25
Unit – III	2		2		
	10		20		30
Unit-IV	2		1		
	10		10		20
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
	5		5		
	(5 x 5) = 25		(5 x 10) = 50		75

INTERNAL EXAMS - 25Marks

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

Plant Tissue Culture & Plant Biotechnology

SEMESTER- VI

Total hours of teaching 30hrs @ 2hrs per week

BOT – 601P

Credits:2

1. (a) Preparation of MS medium.

(b) Demonstration of in vitro sterilization methods and inoculation methods using leaf and nodal explants of Tobacco/ Datura/ Brassica etc.
2. Study of embryo and culture, micro propagation of Banana, somatic embryogenesis, artificial seeds through photographs.
3. Construction of restriction map of circular and linear DNA from the data provided.
4. Study of methods of gene transfer through photographs: Agrobacterium- mediated, direct gene transfer by electroporation, microinjection, and micro projectile bombardment.
5. Different steps involved in genetic engineering for production of Bt. cotton, Golden rice, Flavr Savr tomato through photographs.
6. Isolation of plasmid DNA.
7. Restriction digestion and gel electrophoresis of plasmid DNA (optional)
8. Field visit to a lab involved in tissue culture
9. Study project under supervision of lecturer – tissue culture/ genetic engineering

Expected domain skills to be achieved: Ability to prepare artificial nutrient media, preparing independently, applying various sterilization procedures for media, glassware and biological materials, in vitro propagation of Banana callus, morphogenesis--s, clonal propagation methods, isolation of plasmid DNA individually and as a group.

Total hours of teaching 30hrs @ 2hrs per week**Credits: 2**

Q1. Project report (A) -.....	10M
Viva-voce on study project.....	02M
Q2. Identify and write notes on B, C and D (3x3).....	09 M
B- Tool/instrument/container used in sterilization	
C- Tool/instrument/container used in gene transfer	
D- GM crops (Photographs)	
Q3. Construct restriction map of circular and/ or linear DNA from the data Provided.....	06M
Q 4. Field report.....	03M

Total.....30 **Marks****Internal Assessment**

a. Record -	05M
b. Attendance.....	05M
e. Internal practical exam.....	10M

Total... 20Marks

Total ----- 50M

III-BZC B. Sc	BOTANY-VIII	BOT-602 (CE)	2019-20
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Paper – VIII-A-1: PLANT DIVERSITY AND HUMAN WELFARE Credits: 3
Total hours of teaching 60hrs @ 6hrs per week

Unit- I: Plant diversity and its scope: (12hrs)

1. Genetic diversity, Species diversity, Plant diversity at the ecosystem level,
2. Agro biodiversity and Vavilov Crop centers.
3. Values and uses of biodiversity: Ethical and aesthetic values, Uses of plants.

Unit -II: Loss of biodiversity: (12hrs)

1. Loss of genetic diversity, Loss of species diversity, Loss of ecosystem diversity, Loss of agro biodiversity, projected scenario for biodiversity loss.
2. Management of plant biodiversity: Organizations associated with biodiversity Management-Methodology for execution-IUCN, UNEP, UNESCO, WWF, NBPGR; Biodiversity legislation and conservations, Biodiversity information management and Communication.

Unit-III: Contemporary practices in resource management: (12hrs)

1. Environmental Impact Assessment (EIA), Geographical Information System GIS,
2. Solid and liquid waste management.

Unit -IV: Conservation of biodiversity (12hrs)

1. Conservation of genetic diversity, species diversity.
2. Social approaches to conservation, Biodiversity awareness Programmes, Sustainable development.

Unit- V: Role of plants in relation to Human Welfare (12hrs)

- 1 Importance of forestry, their utilization and commercial aspects-
 - a) Avenue trees, b) ornamental plants of India.
- 2 Fruits and nuts: Important fruit crops their commercial importance. Wood, fiber and their uses.

III B. Sc – BOTANY Model paper (2019-2020)
SEMESTER- VI Paper – VIII-A-1 PAPER – VIII
PLANT DIVERSITY AND HUMAN WELFARE

Time: 3 Hours

Max. Marks: 75

SECTION-A

Answer any five of the following question

5x5=25M.

1. Species Diversity.
2. Wild Taxa.
3. NBPGR.
4. Biodiversity and its Conservation.
5. EIA.
6. Geographical information system (GIS).
7. Sustainable Development.
8. Fiber and their uses.

SECTION-B

Answer any Five of the following questions.

5x10=50M.

9. Give a Note on Plant Diversity and its Scope.
10. Write about Values and Uses of Biodiversity.
11. What is Biodiversity? Discuss about the Loss of Biodiversity?
12. Explain the Various Types Organizations in Biodiversity?
13. Write an essay on EIA ?
14. Write essay an Solid and Liquid Waste Management?
15. What is Conservation? Explain the In-situ and Ex-situ conservation?
16. What are Fruit crops? Explain their Commercial importance?

Guide lines for paper setter: (for Paper VIII -BOT-602) W.e.f. 2019-20

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	1		2		
	05		20		25
Unit-IV	1		1		
	5		10		15
Unit-V	2		1		
	10		10		20
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
	5		5		
	(5 x 5) = 25		(5 x 10) = 50		75

INTERNAL EXAMS - 25Marks

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

Paper – VIII-A-1: Practicals:

PLANT DIVERSITY AND HUMAN WELFARE

SEMESTER- VI

BOT-602-A-1(CL) P

Max. Marks: 50

Time: 3hrs

- 1) Study of plant diversity (flowering plants).
- 2) Study of exotic species- Identification and morphological characteristics.
- 3) Identification of forest trees through bark, wood, flowers, leaves and fruits.
- 4) Maceration, Study of wood (Tracheary elements, fibres).
- 5) Methods of preservation and canning of fruits.
- 6) Visit to the local ecosystem to study the plants.
- 7) Study of Solid and Liquid waste management systems in rural/urban areas.

SCHEME OF PRACTICAL EXAMINATION

- I. Assign the plants **A, B and C** to their respective families, giving reasons, family name and classification-1marks, important diagrams- 2 marks.....**09 marks**
- II. Give the protocol of **D****04marks**
- III. Comment on specimens **E, F and G****3x3 = 09 marks**
- IV. Report on Field visit..... **4 marks**
To study sources of firewood (10 plants), timber-yielding trees (10trees) and bamboos.
- V. Viva-Voce**04marks**
- Total..... **30 Marks**

Internals

- a. Record -05M
- b. Attendance.....05M
- c. Internal practical exam.....10M
- Total..... **20 Marks**

Total -----50M

KEY

A-Cultivated Plant

B- Wild Plant

C –Exotic plant

D- Preservation and canning of fruits, solid and liquid waste management systems in rural/urban areas

E. Bark/wood/fruit yielding plant

F. Nuts/ Alcoholic beverage plant

G. wood /Fibre yielding plant

Paper – VIII-A-1: Practical's:

PLANT DIVERSITY AND HUMAN WELFARE

SEMESTER- VI

BOT-602-A-(CL) P

SCHEME OF PRACTICAL EXAMINATION

Time: 3hrs

Max. Marks: 50

- I. Assign the plants **A, B and C** to their respective families, giving reasons, family name and classification-1marks, important diagrams- 2 marks.....**09 marks**
- II. Give the protocol of **D**.....**04marks**
- III. Comment on specimens **E, F and G****3x3= 09 marks**
- IV. Report on Field visit..... **4 marks**
To study sources of firewood (10 plants), timber-yielding trees (10trees) and bamboos.
- V. Viva-Voce.....**4marks**

Total ---- 30marks

Internals:

- a. Record -05M
- b. Attendance.....05M
- c. Internal practical exam.....10M

Total ---- 20marks

Total -----50M

KEY

A-Cultivated Plant

B- Wild Plant

C –Exotic plant

D- Preservation and canning of fruits, solid and liquid waste management systems in rural/urban areas

E. Bark/wood/fruit yielding plant

F. Nuts/ Alcoholic beverage plant

G. wood /Fibre yielding plant

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III. BZC (B. Sc)	BOTANY-VIII	BOT- 603 (CE)	2019-20
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Paper – VIII-A-2

Credits: 3

ETHNOBOTANY AND MEDICINAL BOTANY

Total hours of teaching 60hrs @ 6hrs per week

Unit –I: Ethnobotany (12hrs)

1. Introduction, concept, scope and objectives
2. Major and minor ethnic groups or Tribal's of India, and their lifestyles.
3. Plants used by the tribal populations:
 - a) Food plants, b) Intoxicants
 - c) Beverages, d) Resins and oils and miscellaneous uses.

Unit -II: Role of ethnobotany in modern Medicine (12hrs)

1. Role of Ethnobotany in modern medicine with special example; Rauwolfiaserpentina, Artemisia annua, Withaniasomnifera.
2. Significance of the following plants in ethno botanical practices (along with their habitat and morphology)
 - a)Azadirachtaindica, b)Vitexnegundo,c)Ocimum sanctum,,d) phyllanthus niruri
3. Medico-Ethnobotanical Sources of India.

Unit-III: Ethno botany as a tool to protect interests of ethnic groups (12hrs)

1. Sharing of wealth concept with few examples from India.
2. Biopiracy, Intellectual Property Rights and Traditional Knowledge.

Unit -IV: History, Scope and Importance of Medicinal Plants, Indigenous Medicinal Sciences (12hrs)

1. Definition and Scope-Ayurveda: History, origin, panchamahabhutas, saptadhatu and tridosha concepts, Rasayana, plants used in ayurvedic treatments.
- 2 Homeopathy: Origin of Homeopathy medicinal systems, Basis of Homeopathy, plants used in Homeopathy medicine.

Unit -V: Conservation of endangered and endemic medicinal plants (12hrs)

1. Definition: endemic and endangered medicinal plants,
2. Red list criteria
3. In situ conservation: Sacred groves, National Parks
4. Ex situ conservation: Botanical Gardens, Seed Banks.

III B. Sc – BOTANY Model paper (2019-2020)

Title of the Paper: **ETHNOBOTANY AND MEDICINAL BOTANY**

SEMESTER- VI
Time: 3 Hours

PAPER – VIII

Cluster – A

Paper – VIII-A-2
Max. Marks: 75

SECTION-A

Answer any five of the following question

5x5=25M.

1. Intoxicants.
2. Withania somnifera.
3. Phyllanthus niruri
4. Curcuma langa.
5. Biopiracy
6. Saptdhatu and Tridosha.
7. Tumors treatments.
8. Red list criteria.

SECTION-B

Answer any Five of the following questions.

5x10=50M.

9. Explain the Relevance of Ethno-Botany in the present Context.
10. Discuss about Major and Minor Ethnic groups of India.
11. Write about Botanical name, Family, Active principle and medicinal uses of Rauvolfia serpentina, Artemisia annua.
12. Write about the Medico-Ethnobotanical Sources of India.
13. Write about the Intellectual property rights and Traditional knowledge.
14. Write an Essay on Basic concepts of Ayurveda.
15. What is Homeopathy system of Medicine? Explain their Basic Concepts?
16. Give an account of Endemic and Endangered Medicinal plants?

Guide lines for paper setter: (for Paper VIII-BOT-603(CE)) W.e.f. 2019-20

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

2. In section-B: Set minimum Two questions from Unit I, II & IV and Set One Question from III , 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	1		1		
	05		10		15
Unit-IV	2		2		
	10		20		30
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
	5		5		
	(5 x 5) = 25		(5 x 10) = 50		75

INTERNAL EXAMS - 25Marks

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

**III B. Sc – Practical Paper
ETHNOBOTANY AND MEDICINAL BOTANY
BOT-VIII-603-A- 2 (CL) P**

**SEMESTER- VI
Time: 3 Hours**

Max. Marks- 50

1. Ethno botanical specimens as prescribed in theory syllabus
2. Detailed morphological and anatomical study of medicinally important part(s) of locally available plants (Minimum 8 plants) used in traditional medicine.

3. Field visits to identify and collect ethno medicinal plants used by local tribes/folklore.

Practical Question Paper

- I. Identify the specimen A- Give reasons (morphological and anatomical) and draw Labeled sketches10marks
- II. Identify and write about the medicinal uses of B and C.....2x4 = 08 marks
- III. Comment on D and E.....2 x 2= 04 marks
- IV. Report on Field visit:.....04 marks
List to be prepared mentioning special features of plants used by tribal Populations as Medicinal Plants & Spices. Write their botanical and common names, Parts used and diseases/disorders for which they are prescribed.
- V. Viva-voce..... 04 marks
- Total.....**30Marks**

Internals Assessment

- a. Record -05M
- b. Attendance.....05M
- c. Internal practical exam.....10M
- Total.....**20 Marks**

Total-----50Marks

KEY

- A-Plants given in unit II (i)
- B-Plants used in Ayurvedic preparations (Amla in Chyavanprash, Senna in Laxatives)
- C - - Do -
- D. Photographs of National parks, Biosphere reserves and Botanical gardens.
- E. Photograph of famous personalities in Ayurveda/Siddha medicine.

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III-BZC B.Sc	BOTANY-VIII	BOT-604- (CE)	2019-20
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SEM-VI: **Pharmacognosy and Phytochemistry** Credits: 3
Total hours of teaching 60hrs @ 6hrs per week

Unit-I: Pharmacognosy

(12hrs)

1. Definition, Importance
2. Classification of drugs - Chemical and Pharmacological
3. Drug evaluation methods

Unit –II: Organoleptic and microscopic studies:

(12hrs)

1. Organoleptic and microscopic studies with reference to nature of active principles and common adulterants of
2. a) *Adhatoda vasica*(leaf) b) *Strychnos nuxvomica* (seed),
c) *Rauwolfia serpentina*(root) d) *Zinziber officinalis* e) *Catharanthus roseus*.

Unit-III: Secondary Metabolites:

(12hrs)

1. Definition of primary and secondary metabolites and their differences, Major types - terpenes, Phenolics, alkaloids, terpenoids, steroids.
2. A brief idea about extraction of alkaloids. Origin of secondary metabolites–detailed account of Mevalonate pathway, Shikimate pathway.

UNIT-IV: Phytochemistry:

(12hrs)

Biosynthesis and sources of drugs:

1. Structural type biosynthesis importance of simple Phenolic compounds, coumarins, Flavonoids.
2. Steroids, sterols: Biosynthesis, commercial importance.
3. Alkaloids: Different groups, biosynthesis, bioactivity.
4. Volatile oils, aromatherapy.

UNIT-V: Enzymes, proteins and amino acids as drugs:

(12hrs)

1. Vaccines, toxins and toxoids, immune globulins, antiserums,
2. Vitamins, Antibiotics – chemical nature, mode of action.
3. Pharmacological action of plant drugs – tumor inhibitors, PAF antagonists, antioxidants, phytoestrogens and others.

SEMESTER- VI

Paper – VIII-A-3

PAPER – VIII Cluster – A

Title of the Paper: **Pharmacognosy and Photochemistry**

Time: 3 Hours

Max. Marks:

75

SECTION-A

Answer any five of the following question

5x5=25M.

1. Classification of Drugs.
2. Catharanthus roseus.
3. Difference between Primary and Secondary Metabolites.
4. Trpenoids.
5. Flavonoids.
6. Aromatherapy
7. Vaccines.
8. Vitamins.

SECTION-B

Answer any Five of the following questions.

5x10=50M.

9. Give an account on Pharmacognosy ?
10. Write an essay on Drug Evolution methods ?
11. Write about nature and Active principles of *Adhatda vasica*, *Rauwfia serpentine* ?
12. Write about common Adulteration of *Zanzibar officinalis*, *Strychnosnuxvomica* ?
13. Give an Brief note on Extraction of Alkalods ?
14. Give an account of mevalonate pathway ?
15. Write about Bio-Synthesis and Commercial importance of Steroids, Sterols ?
16. Explain the role of Different Enzyme inhibitors ?

Guide lines for paper setter: (for Paper VI-BOT-604) W.e.f. 2019-20.

1. In Section A: Unit III, IV, V must carry two questions from each unit. Unit I, II, 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	1		2		
	5		20		25
Unit – II	1		2		
	5		20		25
Unit – III	2		2		
	10		20		30
Unit-IV	2		1		
	10		10		20
Unit-V	2		1		
	10		10		20
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
	5		5		
	(5 x 5) = 25		(5 x 10) = 50		75

INTERNAL EXAMS - 25Mark

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

Pharmacognosy and Phytochemistry

SEMESTER- VI
Time: 3 Hours

BOT-VIII-604-A- 3 (CL)P
Max. Marks- 50

-
1. Physical and chemical tests for evaluation of unorganized drugs-
Asaphoetida, Honey, Castor oil. Acacia
 2. Identification of bark drugs – cinchona, cinnamom
 3. Identification of fruit drugs – Cardamom, Coriander
 4. Identification of root and rhizome drugs- Ginger, Garlic, Turmeric
 5. Identification of whole plant – Aloes, Vinca, Punarnava
 6. Herbarium of medicinal plants (minimum of 20 platns)
 7. Collection of locally available crude drugs from local venders (minimum of 20)

Practical Question Paper

- I. Identify the given crude drugs **A & B** by Anatomical study and Morphological Study.....**2X5 = 10marks**
 - II. Perform suitable chemical test and identify the given phytochemical **C**.....**.05marks**
 - III. Comment on D and E**2x3= 06 marks**
 - IV. Herbarium and submission of drugs -..... **.05 marks**
 - IV. Viva-Voce**.04 marks**
- Total..... **30Marks**

Internals:

- a. Record -05M
 - b. Attendance.....05M
 - c. Internal practical exam.....10M
- Total.....20Marks**

Total -----50M

KEY

A-Flower/fruit drugs

B-Rhizome/whole plant drugs

C- Tannins/ phenolics/steroids/ isoprenoids /Asaphoetida/ Honey/ Castor oil/ Acacia

D. Column Chromatography/ Gas Chromatogram/HPLC (photograph/ instrument used for chemical analysis of drugs.

First year II sem

Suggested Reading

1. The embryology of angiosperms - Bhojwani S.S., Bhatnagar S.P. - Vikas publishing house private Ltd, New Delhi.
2. An introduction to the embryology of angiosperms - Maheswari. P - Tata Mac graw hill company Ltd, New Delhi.
3. Plant physiology - Taiz. L. and E. Zeizer - Sinauer Associates, Inc., publishers. Massachusetts, USA.
4. Introduction to Plant physiology - Hopkins - John Wiley and sons Inc., New York, USA.
5. Plant physiology - Salisbury. F.B. and C.W. Ross - Wordsworth Learning Inc., USA.

Elective paper

Books for Reference:

1. Pullaiah. T. and M.V.Subba Rao. 2009. Plant Tissue culture. Scientific Publishers, New Delhi.
2. Bhojwani, S.S. and Razdan, M.K., (1996). Plant Tissue Culture: Theory and Practice. Elsevier Science Amsterdam. The Netherlands.
3. Glick, B.R., Pasternak, J.J. (2003). Molecular Biotechnology- Principles and Applications of recombinant DNA. ASM Press, Washington.
4. Bhojwani, S.S. and Bhatnagar, S.P. (2011). The Embryology of Angiosperms. VikasPublicationHouse Pvt. Ltd., New Delhi. 5th edition.

CLUSTER PAPER I

Suggested Readings:

1. Krishnamurthy, K.V. (2004). An Advanced Text Book of Biodiversity - Principles and Practices. Oxford and IBH Publications Co. Pvt. Ltd. New Delhi.
2. Singh, J. S., Singh, S.P. and Gupta, S. (2006). Ecology, Environment and Resource Conservation. Anamaya Publications, New Delhi.

3. Rogers, P.P., Jalal, K.F. and Boyd, J.A. (2008). An Introduction to Sustainable Development. Prentice Hall of India Private Limited, New Delhi.

CLUSTER PAPER II

Suggested Readings:

- 1) S.K. Jain, Manual of Ethnobotany, Scientific Publishers, Jodhpur, 1995.
- 2) Glimpses of Indian. Ethnobotny, Oxford and I B H, New Delhi – 1981.
- 3) S.K. Jain (ed.) 1989. Methods and approaches in ethnobotany. Society of ethnobotanists, Lucknow, India.
- 4) S.K. Jain, 1990. Contributions of Indian ethnobotny. Scientific publishers, Jodhpur.
- 5) Colton C.M. 1997. Ethnobotany – Principles and applications. John Wiley and sons Chichester

CLUSTER PAPER III

BOOKS FOR REFERENCE:

1. Wallis, T. E. 1946. Text book of Pharmacognosy, J & A Churchill Ltd. 2. Roseline, A. 2011. Pharmacognosy. MJP Publishers, Chennai.
2. Gurdeep Chatwal, 1980. Organic chemistry of natural productis. Vol.I.Himalaya Publishing house.
3. Kalsi, P. S. and Jagtap, S., 2012. Pharmaceutical medicinal and natural Product chemistry N.K. Mehra . Narosa Publishing House Pvt. Ltd. New Delhi.
4. Agarwal, O. P. 2002. Organic chemistry–Chemistry of organic natural products. Vol. II. Goel publishing house , Meerut.

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

An autonomous college in the jurisdiction of Krishna University

CERTIFICATE COURSE

SEMESTER - III

Total hours of teaching 30 hrs @ 4 hrs per week

MUSHROOM CULTIVATION

Max.Marks:30

UNIT-1

(8 hrs)

1. Mushroom Cultivation- Introduction, Uses, Types of mushrooms.
2. Preparation of Mother Spawn in Saline bottle, sterilization.
3. Cultivation of milky mushrooms.

UNIT-2

(8 hrs)

4. Soil PH, Water, Soil sterilization, dark room, light room.
5. Controled room temperature, culture caring.
6. Diseases and their controlling methods.

UNIT-3

(8 hrs)

7. Storage and nutritional value.
8. Industrial edible mushrooms, poisonous mushrooms.
9. Importance and Medicinal value of mushrooms.

UNIT-4

(6 hrs)

10. Types of food prepared from mushrooms -
11. Marketing in India. Export value.

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CERTIFICATE COURSE

SEMESTER - III

MUSHROOM CULTIVATION

Max.Marks:30

Model paper

SECTION-A

Answer any 4 of the following question

4x3=12M

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

SECTION-B

Answer any 3 of the following question

3x6=18M

- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

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

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

Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF CHEMISTRY

MINUTES OF BOARD OF STUDIES

EVEN SEMESTER

1-10-2019

Minutes of the 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 10.30 A.M on 01-10-2019 in the Department of Chemistry.

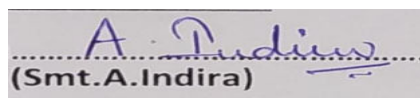
Smt A.INDIRA Presiding

Members Present:

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

Agenda for B.O.S Meeting

1. To recommend the syllabus and model paper for II semesters of I Degree B.Sc., Chemistry for the Academic year 2019-2020.
2. To recommend the syllabus and model papers for IV semesters of II Degree B.Sc., Chemistry for the Academic year 2019-2020.
3. To recommend the syllabus and model papers for VI semesters of III Degree B.Sc. Chemistry for the Academic year 2019-20.
4. To recommend the Blue print of II, IV, & VI semesters of B.Sc. Chemistry for the Academic year 2019-20.
5. To recommend the Guidelines to be followed by the question paper setters in Chemistry for 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.



A. Indira
(Smt.A.Indira)

Chairman.

RESOLUTIONS

- 1) It is resolved to continue the same **syllabus and modified model paper for II semesters of I B.Sc.** under Choice Based Credit System (CBCS) for the Academic year 2019-20also.
- 2) It is resolved to implement the changed syllabus **and model papers** under Choice Based Credit System (CBCS) for the Academic year 2019-20 for **IV semesters of II B.Sc.**
 - **IN UNIT-4 Photo chemistry topic will be added & in unit-5 Phase rule will be added**
- 3) It is resolved to implement the same **syllabus and model papers** under Choice Based Credit System (CBCS) of 2018-19 for the Academic year 2019-20for **VI semesters (General elective-A and cluster Elective-C) of III B.Sc.** Project work for VI Semester CHE 604CE
- 4) It is resolved to follow the **Blue prints** of II, semesters of Degree B.Sc. for the Academic year 2019-20. It is resolved to continue the same **Blue prints** of IV, and VI semesters of Degree B.Sc. for the Academic year 2018-19.
- 5) It is resolved to follow the same guidelines to be followed by the question paper setters for Chemistry II, semesters of Degree B.Sc. for the Academic Year 2018-19. III, IV, V and VI semesters of Degree B.Sc. for the Academic Year 2019-20.
- 6) It is resolved to continue the following teaching and evaluation methods for Academic year 2019-20.

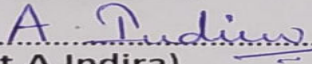
Teaching Methods:

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 IB.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 passing minimum** for internal assessment for I.B.Sc.
- Out of maximum 100 marks in each paper for II&III, 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 II, &III B.Sc.**
- **Semester – End Examination:**
- The maximum mark for IB.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 II & 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, II, III, IV, V, VI 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 “Air Pollution”.**
- 9) NIL.



(Smt.A.Indira)

Chairman

SEMESTER - II	PAPER CODE :CHE-201C
PAPER TITLE : INORGANIC, ORGANIC & PHYSICAL CHEMISTRY, PAPER- II	

60 hrs (4 h / w) Credits - 3

INORGANIC CHEMISTRY

UNIT – I

1. d-block elements

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

UNIT-II

1. f-block elements:

Chemistry of lanthanides - electronic structure, oxidation states, lanthanide contraction, Consequences of lanthanide contraction, magnetic properties. Chemistry of actinides - electronic configuration, oxidation states, actinide contraction, comparison of lanthanides and actinides.

2. Chemical Bonding

Molecular orbital theory - LCAO method, construction of M.O. diagrams for homo nuclear and hetero-nuclear diatomic molecules (N₂, O₂, CO and NO).

ORGANIC CHEMISTRY

UNIT-III

Benzene and its reactivity

- Concept of resonance, resonance energy. Heat of hydrogenation, heat of combustion of Benzene, mention of C-C bond lengths and orbital picture of Benzene.
- Aromaticity - Huckel's rule - application to Benzenoid (Benzene & Naphthalene) Non - Benzenoid compounds (cyclopropenyl cation, cyclopentadienyl anion and tropylium cation)
- Reactions - General mechanism of electrophilic substitution, mechanism of nitration, Friede-Craft's alkylation and acylation.
- Orientation - Definition, ortho, para and meta directing groups, examples.
- Orientation of (i) Amino, methoxy and methyl groups (ii) Carboxy, nitro, nitrile, carbonyl and sulphonic acid groups (iii) Halogens (Explanation by taking minimum of one example from each type)

UNIT-IV

1. Halogen compounds

- Nomenclature and classification of alkyl (into primary, secondary, tertiary), aryl, arylalkyl, allyl, vinyl, benzyl halides.
- Nucleophilic aliphatic substitution reaction- classification into SN^1 and SN^2 – reaction mechanism with examples – Ethyl chloride, t-butyl chloride and optically active alkylhalide 2-bromobutane.

2. Hydroxy compounds

- Nomenclature and classification of hydroxy compounds.
- **Alcohols:** Preparation with hydroboration reaction, Grignard synthesis of alcohols.
- **Phenols:** Preparation- i) from diazonium salt, ii) from aryl sulphonates, iii) from cumene.
- **Chemical properties:**
Dehydration of alcohols. Oxidation of alcohols by CrO_3 , $KMnO_4$.
- Special reaction of Phenols: Bromination, Kolbe-Schmidt reaction, Reimer-Tiemann reaction, Fries rearrangement, azocoupling, Pinacol- Pinacolone rearrangement.

PHYSICAL CHEMISTRY

UNIT-V

Solutions

- Types of solutions, Solutions of liquids in liquids, Raoult's law, Ideal & Non -ideal solutions, Difference b/n ideal and Non-ideal solutions.
- Liquid mixtures-Completely miscible liquid mixtures-examples-Azeotropes (a.HCl-H₂O,b.Ethanol-water) Fractional distillation.
- Partially miscible liquids mixtures-Phenol –water, Triethyl amine-water & Nicotine-water system. Effect of impurity on consolute temperature.
- Immiscible liquid mixtures-steam distillation-Nernst distribution law & its applications. Henrys law-applications.

List of Text & Reference Books

1. 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
5. Advanced Organic Chemistry by F A Carey and R J Sundberg
6. Advanced Physical chemistry by Bahl and Tuli
7. Advanced Inorganic Chemistry Vol-I by Satyaprakash, Tuli, Basu and Madan

SEMESTER – II	COURSE CODE : CHE-201C
PAPER TITLE : PHYSICAL AND GENERAL CHEMISTRY, PAPER – II	

Time: 3Hours

Maximum marks: 70

Pass marks: 28

SECTION-A

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

1. Define and explain space lattice and unit cell.?
2. Define law of symmetry? Explain about centre of symmetry?
3. Define critical constants?
4. Define Henry's law and their limitations?
5. Define and explain Bond order?
6. Explain about symmetry elements?
7. Explain about Specific rotation?

SECTION-B

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

8. Derive Bragg's equation?
9. Derive Vanderwaal's equation of real gases.?
10. Write the differences between Solids and Liquids?
11. Define Nernst distribution law and their limitations. Explain two applications of distribution law/
12. Explain about Fractional distillation and steam distillation
13. Explain Langmuir adsorption isotherms.
14. Explain the shape of $\text{Ni}(\text{CO})_4$ based on valence bond theory
15. Explain about optical isomerism of Tartaric acid?

**The Guidelines to be followed by the question paper setters in chemistry for the
II-Semester - end exams ACADEMIC YEAR-2019-20**

SEMESTER – II	PAPER CODE : CHE-201C
PAPER TITLE : PHYSICAL AND GENERAL CHEMISTRY, PAPER - II	

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (20 Marks)	1 + 1	1
Unit-2 (25 Marks)	1	1 + 1
Unit-3 (25Marks)	1	1 + 1
Unit-4 (25 Marks)	1	1 + 1
Unit-5 (20 Marks)	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 ACADEMIC YEAR-2019-20

Analysis of Salt mixture	PAPER CODE : CHE-201P
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30 hrs (2 h / w) Credits: 2

Qualitative inorganic analysis:

Analysis of mixture salt containing two anions and two cations (From two different groups) from the following:

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

Cations: Lead, copper, iron, aluminum, zinc, manganese, calcium, strontium, barium, Potassium and ammonium.

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

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYURU
(Accredited at "A" Grade by NAAC, Bangalore) ACADEMIC YEAR-2019-20

Analysis of Salt mixture	PAPER CODE : CHE-201P
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SCHEME OF VALUATION

INTERNAL MARKS

- Record =10 M

EXTERNAL MARKS (40 marks)

- Viva.....10M
- PRACTICAL EXAMINATION -30M
 - Identification of anion 6 M
 - Confirmation test for anion 6M
 - Group separation table with correct group 10 M
 - Confirmation test for cation 6 M
 - Report 2 M

TOTAL=50 M

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYURU.
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SEMESTER – IV	SUBJECT: CHEMISTRY	PAPER CODE: CHE-401C
PAPER TITLE: INORGANIC,ORGANIC SPECTROSCOPY & PHYSICAL CHEMISTRY, PAPER-IV		

60 hrs (4h/w)

Credits-3

INORGANIC CHEMISTRY

UNIT- I

Coordination Chemistry-I:

- 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.

ORGANIC SPECTROSCOPY

UNIT-II

1. Spectrophotometry

- General features of absorption - Beer-Lambert's law and its limitations, transmittance, Absorbance, and molar absorptivity. Single and double beam spectrophotometers.
- Application of Beer-Lambert law for quantitative analysis of 1. Chromium in $K_2Cr_2O_7$
2. Manganese in Manganous sulphate

2. Electronic spectroscopy:

- Interaction of electromagnetic radiation with molecules and types of molecular spectra. Energy levels of molecular orbitals (σ , π , n). Selection rules for electronic spectra.
- Types of electronic transitions in molecules effect of conjugation.
Concept of chromophore and auxochrome

UNIT-III

1. Infra red spectroscopy

- Different Regions in Infrared radiations. Modes of vibrations in diatomic and polyatomic molecules. Characteristic absorption bands of various functional groups. Interpretation of spectra-Alkanes, Aromatic, Alcohols carbonyls, and amines with one example to each.

2. Proton magnetic resonance spectroscopy (1H-NMR)

- Principles of nuclear magnetic resonance, equivalent and non-equivalent protons, position of signals. Chemical shift, NMR splitting of signals - spin-spin coupling, coupling constants.
- Applications of NMR with suitable examples - ethyl bromide, ethanol, acetaldehyde, 1,1,2-tribromo ethane, ethyl acetate, toluene and acetophenone.

PHYSICAL CHEMISTRY

UNIT-V

Electrochemistry

- Specific conductance, equivalent conductance. Variation of equivalent conductance with dilution. Application of conductivity measurements- conductometric titrations.
- Arrhenius theory of electrolyte dissociation and its limitations.
- Ostwald's dilution law. Debye-Huckel-Onsagar's equation for strong electrolytes (elementary treatment only).
- Definition of transport number, determination by Hittorfs method.

- Single electrode potential, Nernst equation, Reversible and irreversible cells, Types of electrode- Standard Hydrogen electrode, calomel electrode, Indicator electrode, metal – metal ion electrode, Inert electrode.
- Applications of EMF measurements -Potentiometric titrations.

Text of Text Books

1. Advanced physical chemistry by Guru deep Raj
2. Introduction to Electrochemistry by S. Glasstone
3. Elementary organic spectroscopy by Y.R. Sharma
4. Spectroscopy by P.S.Kelsi
5. Unified chemistry Vol- II by O.P.Agarwal
6. Unified chemistry Vol- II by K.Ramarao and Y. R. Sharma (Kalyani Publishers)

List of Reference Books

1. Spectroscopy by William Kemp
2. Spectroscopy by Pavia
3. Organic Spectroscopy by J. R. Dyer
4. Modern Electrochemistry by J.O. M. Bockris and A.K.N.Reddy

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYYURU.

SEMESTER – IV	PAPER CODE : CHE-401C
PAPER TITLE : SPECTROSCOPY AND PHYSICAL CHEMISTRY, PAPER-IV	

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
IV-Semester - end exams**

SEMESTER – IV	SUBJECT: CHEMISTRY	PAPER CODE: CHE-401C
PAPER TITLE : SPECTROSCOPY & PHYSICAL CHEMISTRY, PAPER-IV		

Weightage for the question paper

syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1 (40 Marks)	1 + 1	1 + 1
Unit-2 (15 Marks)	1	1 + 1
Unit-3 (15 Marks)	1	1
Unit-4 (20 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), VUYURU
(Accredited at "A" Grade by NAAC, Bangalore)

Instrumentation	PAPER CODE : CHE - 401 P
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PRACTICAL SYLLABUS

30 hrs (2h /w) Credits-2

I. Conductometric Titrations

1. Determination of concentration of HCl conductometrically using standard NaOH solution.
2. Determination of concentration of acetic acid conductometrically using standard NaOH Solution.

II. Potentiometric titrations

3. Determination of Concentration of Ferrous ion potentiometrically using standard KMnO_4 solution.
4. Determination of concentration of ferrous ion potentiometrically using standard $\text{K}_2\text{Cr}_2\text{O}_7$ Solution.

III. Colorimetric titrations

5. Verification of Beer-Lamberts Law for KMnO_4 solution and determine the concentration of given test solution.
6. Verification of Beer-Lamberts Law for $\text{K}_2\text{Cr}_2\text{O}_7$ solution and determine the concentration of given test solution.

IR Spectral Analysis

IR Spectral Analysis of the following functional groups with examples

- a) Hydroxyl groups
- b) Carbonyl groups
- c) Amino groups
- d) Aromatic groups

SCHEME OF VALUATION

1. Internal marks
 - Record = 10
2. External marks- 40
 - Practical-25
 - Viva = 10
 - IR Spectral analysis = 5 (Project work)

Total marks =50

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYYURU.

(Accredited at "A" Grade by NAAC, Bangalore)

SEMESTER – VI	SUBJECT: CHEMISTRY	PAPER CODE:CHE-601GE
PAPER TITLE : ANALYTICAL METHODS IN CHEMISTRY, Paper – VII		

60hrs (4h / w) Credits-3

UNIT-I

Quantitative analysis: (10+10+5+5)

15h

a) Importance in various fields of science, steps involved in chemical analysis. Principles of volumetric analysis :. Theories of acid-base, redox, complexometric, iodometric and precipitation titrations - choice of indicators for these titrations.

UNIT-II

Treatment of analytical data: (10+5)

8h

Types of errors, significant figures and its importance, accuracy - methods of expressing accuracy, error analysis and minimization of errors, precision - methods of expressing precision, standard deviation and confidence limit.

UNIT-III

Separation Techniques in Chemical analysis(10+10+5)

15h

SOLVENT EXTRACTION: Introduction,principle,techniques,factors affecting solvent Extraction, Batch extraction, continuous extraction and counter current extraction. Synergism. Application - Determination of Iron (III), organic mixture analysis.

ION EXCHANGE: Introduction, action of ion exchange resins, separation of inorganic mixtures, applications,

UNIT – IV

12h

Chromatography(10+5+5)

Classification of chromatography methods, principles of differential migration adsorption phenomenon, Nature of adsorbents, solvent systems, R_f values, factors effecting R_f values.

Paper Chromatography: Principles, R_f values, experimental procedures, choice of paper and solvent systems, developments of chromatogram - ascending, descending and radial. Two dimensional chromatography, applications.

UNIT -V (10+10+5+5)

10h

Thin layer Chromatography (TLC): Advantages. Principles, factors effecting R_f values. Experimental procedures. Adsorbents and solvents. Preparation of plates. Development of the chromatogram. Detection of the spots. Applications.

Column Chromatography: Principles, experimental procedures, Stationary and mobile Phases, Separation technique. Applications.

GC: Principle and applications

HPLC : Basic principles and applications.

List of Reference Books

1. Analytical Chemistry by Skoog and Miller
2. A textbook of qualitative inorganic analysis by A.I. Vogel
3. Nanochemistry by Geoffrey Ozin and Andre Arsenault
4. Stereochemistry by D. Nasipuri
5. Organic Chemistry by Clayden

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYYURU.

SEMESTER – VI	PAPER CODE : CHE-601GE
PAPER TITLE : ANALYTICAL METHODS IN CHEMISTRY, PAPER-VII	

Time: 3Hours

Maximum marks: 75

Pass marks: 30

SECTION-A

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

1. What are co-precipitation and post-precipitation?
2. Write a short note on coagulation and peptization ?
3. What are significant figures? Explain their importance?
4. Write the applications of solvent extraction
- 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

VI- Semester - end exams

SEMESTER – VI	PAPER CODE : CHE-601GE
PAPER TITLE : ANALYTICAL METHODS IN CHEMISTRY, PAPER-VII	

Weightage for the question paper

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

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PRACTICAL SYLLABUS

Paper title: Chromatography & Volumetric analysis	Paper code : CHE-601GE-P
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Marks:50 30hrs (2 h /W) Credits-2

1. Identification of amino acids by paper chromatography.
2. Determination of Zn using EDTA
3. Determination of Mg using EDTA
4. Hardness of water.

SCHEME OF VALUATION

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

TOTAL = 50 M

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYURU.

(Accredited at "A" Grade by NAAC, Bangalore)

SEMESTER – VI	SUBJECT: CHEMISTRY	PAPER CODE:CHE-602CE
PAPER TITLE : ORGANIC SPECTROSCOPIC TECHNIQUES, Cluster Elective Paper – VIII		

60hrs (4h / w) Credits-3

UNIT-I

NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY (10+10+5+5)

15h

Nuclear spin, Principles of NMR-Classical and Quantum Mechanical methods, Larmour Frequency. Instrumentation. Saturation, Relaxation spin-spin & spin lattice relaxation. Chemical shifts, Shielding and Deshielding mechanism-Factors influencing Chemical shift.

UNIT – II (10+5)

8h

Spin-Spin interactions-factors affecting spin-spin interactions, Deuterium exchange (H^+), coupling constant- types of coupling constant-vicinal, Geminal and long range coupling constant-Factors influencing coupling constants.
Types of PMR Spectrums –AX, AX₂ and AB type with one example.

UNIT-III (10+10+5+5)

14h

Electron Spin Resonance Spectroscopy

Basic Principles, Theory of ESR, Comparison of NMR & ESR. Instrumentaion, Factors affecting the 'g' value, determination of 'g' value. Isotropic and Anisotropic constants. Splitting hyper fine splitting coupling constants. Line width, Zero field splitting and Kramer degeneracy. Crystal field splitting, Crystal field effects.

Applications:- Detection of free radicals; ESR spectra of (a) H^{\cdot} radical (b) Deuterium radical (c) Methyl radical(CH_3) (d) Benzene anion (C_6H_6) (e) $[Cu(H_2O)_6]^{+2}$

UNIT-IV

UV & VISIBLE SPECTROSCOPY (10+10+5+5)

15h

Electronic spectra of diatomic molecules. The Born-oppenheimer approximation. Vibrational coarse structure: Intensity of Vibrational-electronic spectra: The Franck-Condon principle. Electronic structure of diatomic molecules. Types of transitions, Chromophores, Auxochrome, types of shifts in UV Visible spectrum, Conjugated dienes, trienes and polyenes, unsaturated carbonyl compounds-Woodward – Fieser rules.

UNIT-V (10+5)

8h

Electronic spectra of polyatomic molecules Chemical analysis by Electronic Spectroscopy – Beer-Lambert's Law. Deviation from Beer's law. Quantitative determination of metal ions (Mn^{+2} , Fe^{+2}). Simultaneous determination of Chromium and Manganese in a mixture.

REFERENCE BOOKS:

1. Electron Spin Resonance Elementary Theory and Practical Applications- John E. Wertz and James R. Bolton, Chapman and Hall, 1986.
2. Spectroscopic Identification of organic compounds – Silverstein, Basseler and Morrill.
3. Organic Spectroscopy- William Kemp.
4. Fundamentals of Molecular Spectroscopy- C.N.Banwell and E.A. Mc cash 4th Edition, Tata Mc GrawHillPublishing Co., Ltd. 1994.
5. Physical Methods in Inorganic Chemistry – R.S.Drago, Saunders Publications.
6. Application of Mössbauer Spectroscopy – Green Mood.
7. NMR, NQR, EPR and Mössbauer Spectroscopy in inorganic chemistry – R.VParish, Ellis, Harwood.
8. Instrumental Methods of Chemical Analysis- H.Kaur, Pragathi Prakashan, 2003.
9. Instrumental Methods of Analysis, 7th Edition – Willard, Merrit, Dean, Settle, CBS Publications, 1986.
10. Molecular Structure and Spectroscopy – G. Aruldas, Prentice Hall of India Pvt.Ltd, New Delhi, 2001.

SEMESTER – VI	PAPER-VIII	PAPER CODE : CHE-602CE
PAPER TITLE : ORGANIC SPECTROSCOPIC TECHNIQUES		

Time: 3Hours

Maximum marks: 75

Pass marks: 30

SECTION-A

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

1. Write about Nuclear spin?
2. What is Larmour frequency?
3. Write any two types of coupling constant?
4. Write about Kramer degeneracy?
5. What is isotropic and anisotropic constants?
6. Explain Woodward-Fieser rules?
7. Write a short note on Auxochrome?
8. Define and derive Beer-Lambert's law.

SECTION-B

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

9. Explain the instrumentation of the NMR?
10. Explain Spin-Spin relaxation and spin lattice relaxation.
11. Write the types of PMR spectrums of AX,AX2 & AB?
12. Explain the instrumentation of the ESR.
13. Explain the ESR splitting of a) Deuterium radical b)[Cu(H₂O)₆]⁺² ion
14. Explain the electronic spectra of di atomic molecule.
15. Write note on Vibrational coarse structure.
16. Explain the simultaneous determination of Chromium and Manganese in a mixture.

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

PAPER TITLE: ORGANIC SPECTROSCOPIC TECHNIQUES, PAPER CODE: CHE-602CE

Paper – VIII Maximum marks : 75 Duration : 3 Hours

Weightage for the question paper

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

(An Autonomous college in the jurisdiction of Krishna University)

SEMESTER – VI	SUBJECT: CHEMISTRY	PAPER CODE:CHE-603CE
PAPER TITLE : ADVANCED ORGANIC REACTIONS, Cluster Elective Paper – IX		

UNIT – I

60hrs (4h / w) Credits-3

ORGANIC PHOTOCHEMISTRY (10+10+5) 10hrs

Organic photochemistry : Molecular orbitals, carbonyl chromophore–triplet states, Jablonski diagram, inter–system crossing. Energy transfer.

Photochemical reactions: Photo reduction, - mechanism, example-aromatic compounds. sensitizer and influence of sensitizer.

UNIT – II

ORGANIC PHOTOCHEMISTRY (10+10+5) 12hrs

Norrish cleavages, type -I: Mechanism, acyclic cyclicdiones, Photo Fries rearrangement. Norrish type II cleavage: Mechanism and stereochemistry, Type- II reactions of esters: 1: 2 diketones, photo decarboxylation., Di - π methane Rearrangement, Photochemistry – of conjugated dienes, Decomposition of nitrites – Barton reaction.

UNIT – III

PROTECTING GROUPS AND ORGANIC REACTIONS (10+10+5+5) 15hrs

Principles of (1) Protection of alcohols – ether formation including silyl ethers – ester formation, (2) Protection of diols – acetal,ketal and carbonate formation, (3) Protection of carboxylic acids – ester formation, benzyl and t–butyl esters, (4) Protection of amines – acetylation, benzylation, benzyloxy carbonyl, triphenyl methyl groups and fmoc, (5) Protection of carbonyl groups – acetal, ketal, 1,2–glycols and 1,2–dithioglycols formation.

UNIT – IV

SYNTHETIC REACTIONS: (10+5+5)

8hrs

Mannich reaction – Mannich bases – Robinson annulations. The Shapiro reaction, Stork–enamine reaction. Use of dithioacetals – Umpolung, phase transfer catalysis – mechanisms and use of benzyl trialkyl ammonium halides. Wittig reaction.

UNIT –V : NEW SYNTHETIC REACTIONS(10+5+5) 15hrs

Define with example and mechanism- Suzuki coupling, Click reaction, Baylis–Hillman reaction, RCM olefin metathesis, Mukayama aldol reaction.

Define with one example: (Mechanism not required)

Mitsunobu reaction, McMurry reaction, Julia–Lythgoe olefination, Stille coupling and Heck reaction,

Recommended Books

1. Molecular reactions and Photochemistry by Charles Dupey and O.L. Chapman.
2. Molecular Photochemistry by Turru.
3. Importance of antibonding orbitals by Jaffe and Orchin.
4. Text Book of Organic Chemistry by Cram, Hammand and Henrickson.
5. Some modern methods of organic synthesis by W. Carruthers.
6. Guide Book to Organic Synthesis by R.K. Meckie, D.M. Smith and R.A. Atken.
7. Organic Synthesis by O.House.
8. Organic synthesis by Michael B. Smith.
9. Organic Chemistry Claydon and others 2005.
10. Name Reactions by Jie Jack Li
11. Reagents in Organic synthesis by B.P. Mundy and others.
12. Tandem Organic Reactions by Tse–Lok Ho.

SEMESTER – VI	PAPER-IX	PAPER CODE : CHE-603CE
PAPER TITLE : ADVANCED ORGANIC REACTIONS		

Time: 3Hours

Maximum marks: 75

Pass marks: 30

SECTION-A

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

1. Write about Chromophore triplet state?
2. Write about Barton reaction?
3. Explain how to protect the Carbonyl group?
4. Explain how to protect the Diols?
5. Explain about Umpolung?
6. Explain PTC with mechanism?
7. Explain Suziki coupling?
8. Define with one example for Mc Murrey reaction and Stille coupling?

SECTION-B

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

9. Explain about Jablonski diagram in organic photo chemistry?
10. Explain mechanism of photo reduction with examples?
11. Explain Norrissch type –I cleavage with mechanism?
12. Explain Norrissch type –II cleavage with mechanism?
13. Explain how to protect Alcohols?
14. Explain how to protect Carboxylic acids?
15. What is Mannich reaction? Explain with mechanism and Mannich bases?
16. Write the mechanism of Baylis-Hillman reaction and RCM Olefination?

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

PAPER TITLE: ADVANCED ORGANIC REACTIONS, PAPER CODE: CHE-603CE

Paper – IX Semester – VI Maximum marks : 75 Duration : 3 Hours

Weightage for the question paper

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

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SEMESTER – VI	SUBJECT: CHEMISTRY	PAPER CODE:CHE-604CE
PAPER TITLE :PHARMACEUTICAL AND MEDICINAL CHEMISTRY Cluster Elective Paper –X		

60hrs (4h / w) Credits-3

UNIT-I (10+5+5) 12h

Pharmaceutical chemistry Terminology: Pharmacy, Pharmacology, Pharmacophore, Pharmacodynamics, Pharmacokinetics (ADME, Receptors - brief treatment) Metabolites and Anti metabolites.

UNIT-II (10+10+5) 10h

Drugs:

Nomenclature: Chemical name, Generic name and trade names with 10-examples
Classification based on structures and therapeutic activity with one example each.

UNIT-III

Synthesis and therapeutic activity of the compounds: 18h

a. Chemotherapeutic Drugs (10+10+5)

1.Sulphadruugs(Sulphamethoxazole) 2.Antibiotics - β -Lactam Antibiotics-Isolation of Pencilline by submerged culture method, 3. Anti malarial Drugs (chloroquine)

b. Psycho therapeutic Drugs: (10+5)

1.Anti pyretics(Paracetamol) 2.Hypnotics, 3.Tranquilizers(Diazepam) 4.Levodopa

UNIT-IV

Pharmacodynamic Drugs: (10+5+5) 8h

1. Antiasthma Drugs (Solbutamol) 2. Antianginals (Glycerol Trinitrate)
3. Diuretics (Frusemide)

UNIT-V

HIV-AIDS: (10+5) 12h

Immunity - CD-4cells, CD-8cells, Retro virus, Replication in human body,
Investigation available, prevention of AIDS, Drugs available - examples with structures: PIS: Indivanir (crixivan), Nelfinavir(Viracept).

List of Reference Books:

1. Medicinal Chemistry by Dr. B.V.Ramana
2. Synthetic Drugs by O.D.Tyagi & M.Yadav
3. Medicinal Chemistry by Ashutoshkar
4. Medicinal Chemistry by P.Parimoo
5. Pharmacology & Pharmacotherapeutics R.S Satoshkar & S.D.Bhandenkar
6. Medicinal Chemistry by Kadametal P-I & P.II
7. European Pharmacopoeia

SEMESTER – VI	PAPER-X	PAPER CODE : CHE-604CE
PAPER TITLE : PHARMACEUTICAL AND MEDICINAL 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. What are Metabolites and anti metabolites? Explain with example.
2. Write a note on Pharmacology and Pharmacophore.
3. Explain the classification of drugs on the basis of structure.
4. Describe the synthesis and therapeutic activities of Sulphamethoxazole.
5. Write the synthesis,therapeutic activity and side effects of paracetamol.
6. Write a note on Antianginals.
7. Write a note on Frusemide.
8. Explain about immunity.

SECTION-B

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

9. What are Pharma cokinetics ? Describe Absorption,Distribution,Metabolism and Excretion(ADME)of drug.
10. Explain the classification of drugs based on therapeutic activity with examples.
11. Describe the nomenclature systems of drugs.
12. What are antibiotics ? Give examples. Explain the isolation method of pencillin by submerged culture method.
13. .Write the synthesis,therapeutic activity and side effects of Chloroquine.
14. Discuss the synthesis and therapeutic activity of Levodopa.
15. Explain in detail about antiasthma drugs.
16. What is AIDS?How it causes ? Write the drugs available for the treatment of AIDS with their structure?

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

PAPER TITLE: PHARMACEUTICAL AND MEDICINAL CHEMISTRY, PAPER CODE: CHE-604CE

Paper – VIII-C-3 Semester – VI Maximum marks : 75 Duration : 3 Hours

Weightage for the question paper

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

Paper title: Preparations of Organic compounds	Paper code : CHE-602CE-P
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30 hrs (2 h / W)

1. Preparation of Aspirin
2. Preparation of Paracetamol
3. Preparation of Acetanilide
4. Preparation of Barbituric Acid
5. Preparation of Phenyl Azo β -naphthol

SCHEME OF VALUATION

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

TOTAL = 50 M

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VUYYURU.
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Practical syllabus

Paper title: Preparations of Organic compounds by Green procedure	Paper code : CHE-603CE-P
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30 hrs (2h / W)

1. Green procedure for organic qualitative analysis: Detection of N, S and halogens
2. Acetylation of 1o amine by green method: Preparation of acetanilide
3. Rearrangement reaction in green conditions: Benzil-Benzilic acid rearrangement
4. Electrophilic aromatic substitution reaction: Nitration of phenol
5. Radical coupling reaction: Preparation of 1, 1-bis -2-naphthol
6. Green oxidation reaction: Synthesis of adipic acid
7. Green procedure for Diels Alder reaction between furan and maleic anhydride

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 (AUTONOMOUS), VUYYURU.
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Department of Chemistry

Paper title: **Project work**

Paper code : CHE-604CE-P

The students have chosen chemistry as cluster elective. Three projects have been selected and distributed the same among the students.

S.no	Name of the Project	No. of students allotted
1.	Instrumentation	
2.	Laboratory Reagents	
3.	Effects of Drugs	

SCHEME OF VALUATION

1. EXTERNAL- 25M- given by the Examiner (Viva)

2. INTERNAL = 25 M

- **Written viva-10 M**
- **Submission of the project book-15M**

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

2019-2020



DEPARTMENT OF COMMERCE
MINUTES OF BOARD OF STUDIES
EVEN SEMESTER
16-10-2019

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 16-10-2019 in the Department of Commerce.

Dr. K.Venkateswarlu ... Presiding

Members Present:

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



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Minutes

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 2nd Semester as per the guidelines and instruction under CBCS prescribed by Krishna University from the Academic Year 2019-20.
2. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Commerce for the 4th Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2019-20.
3. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Commerce for the 6th Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2019-20.
4. To recommend the Blue print of II, IV & VI Semesters of B.Com (General & Computers) for the Academic Year 2019-20.
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 that no changes are required in syllabi, Model Question Papers and Guidelines for question paper setters in Commerce for the 2nd Semester of **I B.Com., (general & computer)** for the Academic year 2019-20.
2. Discussed and recommended that changes are required in Syllabi, Model Question Papers and Guidelines to be followed by the question paper setters in Commerce for 4th Semesters **II B.Com., A New Topic Consumer Protection Act 1986 Incorporated in Unit IV Of Business Laws (general & computer)** for the Academic year 2019-20. Leadership education LEP 404 for IIB.A., B.COM & B.Sc.
3. Discussed and recommended that no changes are required in syllabi, Model Question Papers and Guidelines for question paper setters in Commerce for the 6th Semester of **III B.Com., (general & computer)** for the Academic year 2019-20. PROJECT WORK FOR VI SEM COM607 P

Teaching methods:

Besides the conventional methods of teaching, we use modern technology i.e. using of an 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) I & II B.Com (General & Computers)

- Out of maximum 100 marks in each paper 30 marks shall be allocated for internal assessment for I & II 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/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.

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

Out of maximum 100 marks in each paper, 25 marks shall be allocated for internal assessment for VI Semester. 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.**

- **Semester – End Examination:**

The maximum marks for **III B.Com. (General & computer) VI** Semester – End examination shall be 75 marks and duration of the examination shall be 3 hours.

4. Discussed and recommended to continue the Tally certificate course for II B.Com general and to organize certificate course online/offline, seminars, Guest lecturers, Online Examinations and Workshops to upgrade the knowledge of students for Competitive Examinations for the approval of the Academic Council.



Chairman

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE VUYYURU

(AUTONOMOUS)

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

Commerce	CACC -201G/C C	2019-2020	<i>I.B.Com(gen/comp)</i>
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SEMESTER – II

FUNDAMENTALS OF ACCOUNTING –II

OBJECTIVE:-To make the students acquire the knowledge in special type of Transactions and also the importance of negotiable instruments

Course outcomes

CO 1: Able to discuss and describe various methods of depreciation and valuation of depreciation to depreciable assets.

CO 2 Able to discuss and describe different types of reserves and provisions and give accounting treatment for reserves and provisions in final accounts

CO 3 Grasp the accounting treatment in issue of negotiable instruments and also learn the techniques of accounting to bills

CO 4 Gain an understanding with regard to special transactions related to accounting for consignment.

CO 5 Gain the knowledge with regard to special transactions relating to joint Venture business.

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SEMESTER – II

SYLLABUS

Fundamentals of Accounting – II

Unit-I: Depreciation

Meaning of Depreciation - Methods of Depreciation: Straight line – Written down Value – Sum of the Years' Digits - Annuity method (Problems).

Unit-II: Provisions and Reserves

Meaning – Provision vs. Reserve – Preparation of Bad debts Account – Provision for Bad and doubtful debts – Provision for Discount on Debtors – Provision for discount on creditors -Repairs and Renewals Reserve A/c (Theory only)

Unit-III: Bills of Exchange

Meaning of Bill –Features of bill – Parties in the Bill – Discounting of Bill – Renewal of Bill – Entries in the books of Drawer and Drawee (Problems).

Unit-IV: Consignment Accounts

Consignment - Features - Proforma invoice - Account sales – Del-credre Commission - Accounting treatment in the books of consigner and consignee - Valuation of closing stock - Normal and Abnormal losses (Problems).

Unit-V: Joint Venture Accounts

Joint venture - Features - Differences between Joint-venture and consignment – Accounting procedure - Methods of keeping records (Problems).

Reference Books:

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

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SEMESTER – II

Fundamentals of Accounting – II

MODEL PAPER

Time: 3 hrs

Max. Marks: 70

SECTION - A

I. Answer any TWO of the following

2X 5 = 10

1. Define Depreciation? State the factors causing depreciation?
- 2 Briefly explain about special reserve?
- 3 What is bill of exchange? Explain its advantages briefly
- 4 What are the features of Consignment ?

SECTION - B

II. Answer any FOUR of the following

4 X 15= 60

5 On 1st July 2001 company limited purchased second hand machinery for Rs. 20,000 and spends Rs. 3,000 on reconditioning and installing it. On 1st January, 2002 the firms purchases new machinery worth Rs. 12,000. On June 30th 2003 the machinery purchased on 01-01-2002 was sold for Rs. 8,000 and on 1st July 2003 fresh plant was installed at a cost of Rs. 15,000. The company writes off 10% on the original cost. The accounts are closed every year ending 31st December . Show the Machinery account for 3 years ending 31st December 2004.

6 What do mean by the terms of Provision and Reserve? Distinguish between Provision and Reserve

7 .Ram sold goodsworth Rs.2000 to rahim on August 1st ,2018 and he .draws a bill on Rahim for Rs. 2,000 payable after two months on 01-09-2018 ram endorses rahim's acceptance to Mahesh. On the due date the bill is honoured.Pass the necessary journal entries in the books of all the Parties.

8 1000 Toys were consigned by Anand & Co., of Visakhapatnam to Benerjee of Calcutta of an invoice of Rs. 300 each. Anand & Co., paid freight Rs. 20,000 and insurance Rs. 3,000. During the transit 100 toys were totally damaged by fire. Benerjee took delivery of the remaining toys and paid Rs. 21,000 as delivery charges and Rs. 7,800 as customs duty. Benerjee sent a bank draft to Anand & Co., for Rs. 1, 00,000 as advance payment and later sent an account sales showing that 800 toys were sold at Rs. 440 each. Benerjee is entitled to a commission of 5%. Prepare consignment account. Benerjee account and abnormal loss account in the books of Anand & Co., assuming that nothing has been recovered from the insurance company, for the damaged caused.

9 P and Q undertake jointly to contract a building for X Ltd, for a contract price of Rs. 80,000. The price was to be paid Rs. 60,000 in cash and the balance in shares of X ltd., A bank account was opened jointly, P and Q contributing Rs. 25,000 and Rs. 20,000. They agreed to share profit or loss in the proportion of 2/3 and 1/3rd respectively. The joint venture transactions were as under.

	Rs.
Materials purchased	38,000
Wages paid	22,000
Establishment expenses paid	4,000

The contract was completed and the price was received. The shares were sold for Rs. 17,000 Q took away the unused materials at Rs. 1,100.

Show that necessary accounts in the books of P.

10 A lease is purchased on 1st January 2011 for four years at a cost of Rs 20,000.its proposed to Depreciated the lease by the Annuity method charging interest @ 5% p.a. A reference to the annuity table shows that to depreciate Re 1 by annuity method over 4 years charging interest at 5% p.a. one must write off a sum of Re. 0.2820. show the lease account for four years and also the relevant entries in the Profit and Loss Account.

11 . What is Consignment? How does it differ from Sale?

12 . What is meant by Joint venture? What are the differences between a Joint venture and Consignment?

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SEMESTER – II

Fundamentals of Accounting – II

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Depreciation	Provisions and Reserves	Bills of Exchange	Consignment	Joint venture
5 Marks questions	1	1	1	1	---
15 Marks questions	2P	1T	1T	1T+1P	1T+1P
Weight age	35	20	20	35	30

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SEMESTER – I

BUSINESSENVIRONMENT

Objective: 1. This course develops the ability to understand and scan the business Environment and analyse opportunities and take decisions under uncertainty.

2. Students able to understand various economic policies, structure and importance of union budgets and legal aspect regarding companies act 2013

Course outcomes

CO1: Understand how an entity systematically explores the external environment in which business operates.

CO2: To enlighten/familiarize the impact of economic growth and economic Development on businesses.

CO3: To acquire specialized knowledge relating to economic development and economic planning in India.

CO4: To familiarize with various economic policies, structure and importance of union budgets.

CO5: To enlighten about legal, social, political and ethical environment of business.

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SEMESTER – II

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 - Leal 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 – II

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 – II

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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SEMESTER – IV

ACCOUNTING FOR SERVICE ORGANISATION

Objectives

1. To enable the students to understand company (Non profit organizations) as per Sec (8) of Companies Act 2013 and prepare its final accounts
2. To provide and enable the students with the basic knowledge relating to the electricity, bank, and Insurance Companies its typical terms and prepare financial statements of accounts

COURSE OUTCOMES

CO1: The students will acquire knowledge about non-profit organizations and how to prepare financial statements of non- profit organizations.

CO2: The students will be able to prepare financial statements electricity companies.

CO3: The students will be able to prepare financial statements banking companies.

CO4: The students will be able to know how to ascertain the profit of Life insurance companies and to prepare valuation balance sheet.

CO5: The students will be able to know how to ascertain the profit of General insurance companies and to calculate reserve for unexpired risks

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SEMESTER –IV

SYLLABUS

Accounting for Service Organizations

Unit-I: Non-Trading/ Service Organizations:

Concept - Types of Service Organizations – Section (8) and other Provisions of Companies Act,2013.

Unit – II Electricity Supply Companies:

Accounts of Electricity supply companies: Double Accounting system – Revenue Account – Net Revenue Account – Capital Account – General Balance Sheet (including problems).

Unit – III - Bank Accounts

Bank Accounts – Books and Registers to be maintained by Banks – Banking Regulation Act, 1969 - Legal Provisions Relating to preparation of Final Accounts (including problems).

Unit -IV:Life Insurance Companies

Life Insurance Companies –Preparation of Revenue Account, Profit and Loss Account, Balance Sheet (including problems) – LIC Act, 1956.

Unit – V: General Insurance

Principles – Preparation of final accounts – with special reference to fire and marine insurance (including problems) – GIC Act, 1972.

Suggested Readings

1. Corporate Accounting – RL Gupta & M. Radha Swami
2. Corporate Accounting – P.C. Tulsian
3. Company Accounts : Monga, Girish Ahuja and Shok Sehagal

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SEMESTER –IV

Accounting for Service Organizations

MODEL PAPER

TIME -3hrs

Max. Marks: 70

SECTION-A

I. Answer any TWO of the following 2x5=10M

1. What are the features of Non-trading organisations
2. What is reasonable rate of return
3. Non banking assets
4. Reserve for Unexpired risk

SECTION-B

II. Answer any FOUR of the following 4x15=60M

5. Write the special features of double Account system?
6. Visakha Friends club gives you their Receipts and Payments A/c and other Information and requests you to prepare their Income and Expenditure A/c for the year ending 31-12-2007 and Balance sheet as on that date.

Receipts and Payments A/c for the year ended 31-12-2007

Receipts	Rs.	Payments	Rs.
To Balance	3,800	By Salaries	20,000
To Subscriptions	90,000	By Buildings	1,55,000
To Donations for Buildings	80,000	By purchase of Investments	20,000
To Sale of Investments	42,000	By Printing	22,000
To Interest	10,200	By General Expenses	4,000
By Balance		5,000	
	2,26,000		2,26,000

Additional information:

1. Opening Balances:

Buildings Rs.20, 000, Investments Rs.50,000 , Outstanding Subscriptions Rs. 6,000

2. Value of Investments sold is Rs. 45,000

3. Interest receivable on Investments on 31-12-2007 Rs. 1,500/-

4. Outstanding Subscriptions on 31-12-2007 Rs. 7,800/-

5. Subscriptions Received in Advance on 31-12-2007 Rs. 500/-

7 . The following balances appeared in the books of South East Electric Supply Company Ltd as on 31-12-2011.

Particulars	Debit	Credit
Equity Shares		7, 00,000
Debentures		1, 00,000
Land on 31-12-10	1, 50,000	
Purchased during 2011	60,000	
Mains on 31-12-10	1, 60,000	
Mains Purchased during 2011	76,000	
Machinery on 31-12-10	5, 50,000	
Purchased during 2011	66,000	
Creditors		1,000
Depreciation Fund	2, 50,000	
Debtors	40,500	
Stores on hand	8,000	
Cost of generation of electricity	31,000	
Cost of distribution	8,000	
Cash in hand	2,000	
Sale of current	1, 40,000	
Meter rent		15,000
Rent rates	12,000	
Establishment expenses	21,000	
Interest on Debentures	20,000	
Interim Dividend	10,000	
Depreciation	20,000	
Net revenue account balance on 31-12-10		28,500

Prepare (a) Revenue account (b) Net revenue a/c. (c) Capital account (d) General Balance Sheet

8. Lakshmi bank Ltd. Have the following bills in its advances portfolio on 31st December 2009.

S.NO.	Date of the bill	Amount(Rs.)	Term (Months)
1	Nov.11	5,000	4
2	Dec.16	6,000	3
3	Dec.7	4,000	4

The rate of discount is 10%. you are required to calculate the rebate on bills discounted and give the necessary journal entries.

9. The following figures have been extracted from the books of Ronald bank Ltd 31-3-2013 prepare profit and loss account and balance sheet .

	Rs.		Rs.
Paid up capital	10,00,000	Investment reserve	35,000
P&L account(cr.)	40,323	Branch adjustments(cr.)	36,894
Current accounts	34,12,604	Printing and stationery	4,543
Fixed deposits	38,95,554	Provident fund contribution	10,000
Savings bank	25,68,000	Salaries	50,650
Directors fee	5,980	Unexpired insurance	437
Furniture (castRs.50,000)	37,280	Statutory reserve	2,65,000
Interest on deposits	2,10,223	Legal expenses	1,650
Stamps in hand	189	Cash in hand	4,16,324
Land and buildings (costRs.3,00,000)	2,05,000	Deposits with banks	12,05,125
Deposit with RBI	40,00,000	Investments	8,78,125
Cash credits and over drafts	70,00,000	Bills discounted	14,00,520
Contingency reserve	50,000		
Commission and exchange	1,02,225		

The authorized capital of the bank is 20 lakhs divided into 20,000 shares of Rs.100 each. All shares have been subscribed, only half of the face value is called up depreciation on land and buildings Rs.8,000 on furniture Rs.3500 create provision for taxation Rs.1,10,000,.

10. The following are the balances extracted from the ledger of the life insurance corporation as on 31-12-2006

Particulars	Rs.	Particulars	Rs.
Life fund at the beginning	14,00,000	Bonus in reduction of premium	2,500
Claims by death	76,000	Preliminary expenses	600
Claims by maturity	56,000	Claims admitted but not paid at the end of the year	80,000
Premium	2,10,000	Annuities due but not paid	22,000
Management expenses	19,000	Share capital of Rs.100 each share	4,00,000
Commission	26,000	Government securities	15,00,000
Consideration for annuities granted	10,000	Sundry assets	4,33,700
Interest dividends and rents	52,000		
Income tax on profit	300		
Fines	100		
Surrenders	21,000		
Annuities	30,000		
Bonus paid in cash	9,000		

From the above particulars prepare the revenue account and balance sheet of the corporation,

Adjustments:

1. Claims covered under reinsurance by death Rs.5,000
2. Further claims intimated (by death) Rs.4,000
3. Bonus the reduction on premium Rs.1,000
4. Interest accrued Rs. 15,000
5. Premium outstanding Rs. 10,000

11. From following particulars prepare Fire Revenue A/C for year ending 31-3-2016.

	Rs.
Claims paid	9,60,000
Claims as on 1-4-2015	80,000
Claims intimated but not accepted on 31-3-2016	20,000
Claims intimated and accepted but not paid on 31-3-2016	1,20,000
Premium received	24,00,000
Re-insurance premium	2,40,000
Commission	4,00,000
Commission on reinsurance ceded	20,000
Commission on reinsurance accepted	10,000
Expenses of management	6,10,000
Provision for unexpired risk on 1-4-2015	8,00,000
Additional provision for unexpired risk	40,000
Bonus in reduction of premium	24,000

You are required to provide for additional reserve for unexpired risks at 1% of net premium in addition to opening balance.

12. Distinguish between Life Insurance General Insurance

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SEMESTER –IV

Accounting for Service Organizations

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Non-Trading/ Service Organizations	Electricity Supply Companies	Bank Accounts	Fire Insurance Companies	General Insurance
5Marks	1	1	1	0	1
15 Marks	1P	1T+ 1P	2P	1P+1T	1P
Weight age	20	35	35	30	20

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SEMESTER – IV

BUSINESS LAWS

Objective: To make the students learn the basics of business laws and apply them in real life Situation

COURSE OUTCOMES

CO1 – Impacts the students in acquiring the basic knowledge regarding contracts in business.

and impact of it to “QUID-PRO-QUO” for the enforceability of the contract

CO2 –Students will have clarity on competency of persons, modes of discharge of contract, analyzing and approaching to remedies in times of breach of contract.

CO3-Studentswill gets knowledge in law and procedure relating to sale of goods in Indian context.

CO4-Students are able to acquire knowledge in law and procedure relating to consumer rights

CO5- Students will get knowledge in new dimensions in business Organisation relating to cyber laws

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SEMESTER –IV

SYLLABUS

Business Laws

Unit-1 Contract

Meaning and Definition of Contract-Essential elements of valid Contract -Valid, Void and Voidable Contracts - Indian Contract Act, 1872.

Definition of Valid Offer, Acceptance and Consideration -Essential elements of a Valid Offer, Acceptance and Consideration.

Unit-2 Capacity of the Parties and Contingent Contract

Rules regarding to Minors contracts - Rules relating to contingent contracts – Different modes of discharge of contracts-Rules relating to remedies to breach of contract.

Unit-3 Sale of Goods Act 1930

Contract of sale – Sale and agreement to sell – Implied conditions and warranties –Rights of unpaid vendor.

Unit-4 Consumer Protection Act, 1986

Introduction, Aims and objectives of the Act - Definition - Consumer Rights - Unfair and restrictive trade practices - consumer protection Councils - Consumer disputes Redressal agencies - Penalties for violation.

Unit-5: Cyber Laws

Cyber Law and Contract Procedures - Digital Signature - Safety Mechanisms.

Suggested Readings:

1. J. Jayasankar, Business Laws, Margham Publication. Chennai -17
2. Kapoor ND, Mercantile Law , Sultan Chand
3. Balachandram V, Business law Tata
4. Tulsian , Business Law Tata

DEPARTMENT OF COMMERCE

Revision of the syllabus 2019-20 (SEM -2,4,6)

Name of the Subject: **Business Laws**

Subject Code: CBL402 G/C C

Semester -IV

Academic Year	2019-20
Title of the paper	Business Laws
Semester	IV
Course code	CBL402 G/C C
CIA marks	30
Semester End marks	70
Total marks	100
Year of Introduction	2019-20
Year of Revision	2019-20
% of revision	20%

UNIT	Syllabus	Addition	Deletion
I	Contract: Meaning and Definition of Contract- Essential Elements of Valid Contract - Valid, Void and Voidable Contracts- Indian Contract Act, 1872. Offer, Acceptance and Consideration: Definition of Valid Offer, Acceptance and Consideration- Essential Elements of a Valid Offer, Acceptance and Consideration		
II	Capacity of the Parties and Contingent Contract: Rules Regarding Minors Contracts- Rules Relating to Contingent Contracts- Different Modes of Discharge of Contracts -Rules Relating to Remedies to Breach of Contract.		

III	<p>Sale of Goods Act 1930 : Contract of Sale -Sale and Agreement to Sell - Implied Conditions and Warranties - Rights of Unpaid Vendor.</p>		
IV	<p>Consumer Protection Act 1986: Introduction- Aims, and Objectives of the Act.- Definition – Consumer Rights –Unfair and restrictive trade practices -Consumer Dispute- Consumer Protection Councils - Consumer Dispute Redressal Mechanism - Penalties for violation.</p>	<p>Consumer Protection Act 1986: Introduction- Aims, and Objectives of the Act.- Definition – Consumer Rights –Unfair and restrictive trade practices - Consumer Dispute- Consumer Protection Councils - Consumer Dispute Redressal Mechanism- Penalties for violation.</p>	
V	<p>Cyber Law: Overview and Need for Cyber Law-Contract Procedures- Digital Signature– Safety Mechanisms</p>		

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SEMESTER –IV

Business Laws

MODEL PAPER

TIME -3hrs

Max. Marks: 70

SECTION-A

I. Answer any TWO of the following

2x5=10M

1. Acceptance
2. Contingent contracts
3. Unpaid seller
4. District forum

SECTION-B

II. Answer any FOUR of the following

4x15=60M

5. Define the term contract? What are the essentials of a valid contract?
6. Define consideration? What are legal rules to considerate?
7. Write about rules regarding Minors agreement?
8. What are the remedies available to an aggrieved party on the breach of Contract?
9. What is a contract of sale Explain its essential also distinguish a contract of sale from an Agreement to sell?
10. Explain briefly the implied conditions and warranties in a contract of sale?
11. Explain the provisions regarding secure electronic records and secure digital signatures?
12. Define consumer? What are the rights of a consumer under consumer Protection act, 1986?

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SEMESTER –IV

Business Laws

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Contract	Capacity of the Parties and Contingent Contract	Sale of Goods Act 1930	Consumer Protection Act, 1986	Cyber Laws
5Marks	1	1	1	1	0
15Marks	2	2	2	1	1
Weight age	35	35	35	20	15

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SEMESTER –IV

Income Tax

OBJECTIVES:

1. To Impart knowledge of the concepts, principles, and rules of taxation of individuals and Agricultural Income
2. To provide and enable the students with the basic knowledge of Computation of total income of an individual
3. Recognize tax planning opportunities and recommend appropriate tax-saving strategies for decision making

COURSE OUTCOMES:

- CO1 :** Impact knowledge on the provisions of income tax law and practice Acquire Knowledge about Income exempt from tax and residential status of an individual
- CO2:** Enlist the ability of provisions of Income from salary and its deductions u/s 80c
- CO3:** The student can build an idea about Income from house property and its taxability
- CO4:** The student can acquire knowledge in calculation of capital gain and income from Other sources
- CO5:** The student can acquire knowledge in calculation of Computation of total income of an Individual

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SEMESTER –IV

SYLLABUS

Income Tax

Unit-I

Introduction: Income Tax Law – Basic concepts: Income, Person, Assesses, Assessment year, Agricultural Income, Residential status, Income exempt from tax (Theory only).

Unit-II

Income from salary: Allowances, perquisites, profits in lieu of salary, deductions from salary income, computation of salary income and qualified savings eligible for deduction u/s 80C(Simple- problems).

Unit-III

Income from House Property: Annual value, let-out/self occupied/deemed to be let-out house, deductions from annual value - computation of income from house property (Simple- problems)

Unit-IV

Income from Capital Gains – Income from other sources – (from Individual point of view) -chargeability – and assessment (Simple- problems).

Unit-V:

Computation of total income of an individual – Deductions under section - 80 (Simple- problems).

Reference Books:

1. Dr. Vinod; K. Singhania; Direct Taxes – Law and Practice, Taxman Publications
2. B.B. Lal; Direct Taxes; Konark Publications
3. Dr. Mehrotra and Dr. Goyal; Direct Taxes – Law and Practice; Sahitya

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SEMESTER –IV

Income Tax
Model Question Paper

Time: 3 Hrs

Max. Marks: 70

SECTION – A

I. Answer any TWO of the following

2X 5 = 10M

1. Explain about agricultural income
2. Describe House rent allowance
3. Explain gross annual value
4. Surcharge

SECTION – B

II. Answer any Four of the following

4 x15 =60M

5. How would you determine the residential status of a person.
6. Explain different perquisites?
7. From the following particulars of sriram, a manger of a firm, compute his taxable income from salary
 - 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

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

<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 1-3-2019.

Calculate the amount of taxable capital gain. CII for 2019-20 is:280

10. Compute total Income of Sri saibaba, an Indian resident of 30 years age

Gross Salary=86,000

Income from house property (computed)=20,000

Short term capital loss=10,000

Long term capital loss(Building)=12,000

Income from profession=5,000

Interest on securities(Gross)=4,000

Income from Govt. securities(Gross)=16,750

He donated Rs.5,000 to the P.M National Relief Fund and Rs.2,000 raise to the Prime Minister's Drought Relief Fund.

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SEMESTER –IV

Income Tax

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Introduction	Income from salary	Income from House Property	Income from Capital Gains Income from other sources	Computation of total Income of an individual
5Marks	1	1	1	0	1
15Marks	1T	1T+1P	1P	1P	1P
Weight age	20	35	20	15	20

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SEMESTER –IV

SYLLABUS

Banking Theory & Practice

Objective:

1. To impart knowledge in banking and financial services and update the innovations of the current banking system like E-Banking advancements.
2. To equip the students with the knowledge of Reserve Bank, Narbad and KYC norms
3. To provide and enable the students with the basic knowledge relating to general and special relationship between Banker and Customer

COURSE OUTCOMES:

CO1: To understand the importance of commercial banking and the operations and structure of different financial institutions. To familiarize the students with regard of Organization working and importance of RBI

CO2: To train and equip with the skills in banking and financial services and Innovations of the current banking systems like e-banking advancements

CO3: To familiarize the students with regard to working and importance of Regional Rural Bank and NABARD

CO4: To know about the general and special relationship between Banker and Customer and KYC norms.

CO5: To get knowledge about Duties & Responsibilities of Collecting Banker and Responsibilities of Paying Banker - Payment Gateways.

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SEMESTER –IV

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 –IV

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 –IV

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-VI

Event management

OBJECTIVES: identifying events and determining corresponding control measures that events can be programmed in such a way that operational information is transferred

Develop and implement financial initiatives based on event objectives through methods such as sponsorship programs, grant applications, and fundraising initiatives. Plan, design, and coordinate effective site and facility operations.

COURSE OUTCOMES

CO1. Identify the needs of customers for organizing a corporate event and understand the types of Events.

CO2: Examine various types of Outdoor events and Managing the risk in the events. Relate Marketing management, Human Resource Management to Event Management

CO3: Students able to organize Shows, fashion shows, high profile charity events.

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SEMESTER -VI

SYLLABUS

Event Management

Unit-I: Event Concept: Corporate Events and Customer's needs - Types of Events - Corporate hospitality – Exhibitions – Trade Fairs – Conferences –Business and Government Meets - Corporate event packages - Menu Selection - Customization.

Unit-II: Outdoor Events: Logistics, Types of Outdoor events, Risk management - Health and safety, Marketing and sponsorship, HR Management, Programming and Entertainment.

Unit-III: Celebrity Events: Launches, Fashion shows, National festivals and high-profile charity events - Liaison with agents, Contract Negotiations, Client briefings, Celebrity wish lists and expectations - Liaisoning with Govt. Departments.

References:

1. Event Management: A Blooming Industry and an Eventful Career by Devesh Kishore, Ganga Sagar Singh - Har-and Publications Pvt. Ltd.
2. Event Management by Swarup K. Goyal - Adhyayan Publisher.
3. Event Management & Public Relations by Savita Mohan - Enkay Publishing House
4. Event Entertainment and Production - Mark Sonder, CSEP, Wiley & Sons, Inc.
5. Special Event Production - Doug Matthews. 6. Fenich, G. Meetings, Expositions, Events, and Conventions: An introduction to the industry. New Jersey: Pearson Prentice Hall.

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SEMESTER -VI

Model paper

Event Management

Time: 3 hrs

Max. Marks: 50

SECTION- A

I. Answer any FOUR of the following questions

4 x 5= 20M

1. Corporate Hospitality
2. Trade Fairs
3. Risk Management
4. Sponsorship
5. Fashion Shows
6. Liaisoning

SECTION- B

II. Answer any THREE of the following questions

3 x 10 = 30M

7. Explain Different Types of Events
8. What are the uses of Exhibitions
9. Explain Different Types of Logistics
10. What is Programming of an Event and Entertainment
11. Who would launch a Product
12. Explain about High profile Charity Events.

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SEMESTER -VI

Guidelines to the paper setter

Event Management

	UNIT-I	UNIT-II	UNIT-III
	Event Concept	Out Door Events	Celebrity Events
5 Marks questions	2	2	2
10 Marks questions	2	2	2
Weightage	30	30	30

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SEMESTER-VI

Marketing

Objective: 1.To acquire knowledge on marketing concepts, 7P's, to build applicable skills through variety internship opportunities

2. Student will gain understanding of consumer buyer behaviour, pricing strategies and ethical concept of marketing

COURSE OUTCOMES

CO1: To introduce the concepts of marketing and understand the factors influence the market environment.

CO2: Analyze the consumer market models and enlightens consumer buyer behaviour models.

CO3: Understand the concept of product and identify the need of product mix and product line decisions.

CO4: Develop an idea about pricing strategies and pricing decisions.

CO5: Enhance the students about decisions regarding promotion and distribution channels.

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SEMESTER -VI

SYLLABUS

Marketing

Unit-I: Introduction: Concepts of Marketing: Product Concept – Selling Concept - Societal Marketing Concept – Marketing Mix - 4 P's of Marketing – Marketing Environment.

Unit-II: Consumer Markets and Buyer Behaviour: Buying Decision Process – Stages – Buying Behaviour – Market Segmentation – Selecting Segments – Advantages of Segmentation.

Unit-III: Product Management: Product Life Cycle - New products, Product mix and Product line decisions - Design, Branding, Packaging and Labeling.

Unit-IV: Pricing Decision: Factors influencing price determination, Pricing strategies: Skimming and Penetration pricing.

Unit-V: Promotion and Distribution: Promotion Mix - Advertising - Publicity – Public relations - Personal selling and Direct marketing - Distribution Channels – Online marketing- Global marketing.

References:

1. Philip Kotler, Marketing Management, Prentice Hall of India.
2. Philip Kotler & Gary Armstrong, Principles of Marketing, Pearson Prentice Hall
3. Stanton J. William & Charles Futrel, Fundamentals of Marketing, McGraw Hill Company
4. V.S. Ramaswamy S. Nama Kumari, Marketing Management – Planning, McMillan

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SEMESTER -VI

Model paper
Marketing

Time: 3 hrs

Max. Marks: 75

SECTION- A

I. Answer any THREE of the following questions 3 x 5= 15M

1. Selling Concept
2. Marketing Environment
3. Buying Behavior
4. Branding
5. Skimming Pricing
6. Publicity

SECTION- B

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

7. Describe 4P's of Marketing
8. What are the Different Concepts of Marketing
9. What is Market Segmentation?
10. Describe Product Life Cycle.
11. What are the Factor Influencing Price Determination
12. What are the differences Between Personal selling and direct Marketing?
13. What are the Various Distribution Channels?
14. What are the advantages of targeting and positioning

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SEMESTER -VI

Guidelines to the paper setter

Marketing

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Introduction	Consumer Markets and buyer Behavior	Product Management	Pricing decision	Promotion and Distribution
5Marks	2	1	1	1	1
15Marks	2	2	1	1	2
Weightage	40	35	20	20	35

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SEMESTER -VI

OBJECTIVES:

Auditing

1. To impart knowledge pertaining to basic concepts of auditing.
2. To make the students learn the basics of rights and duties regarding auditing and audit report.
3. To acquaint oneself with auditing procedure.

COURSE OUTCOMES

CO1: Students will develop the knowledge & importance of auditing and accounting Of any Organisation and Role of Auditor in checking corporate frauds.

CO2: Students will have the ability of understanding the applicability of auditing types for different organizations

CO3: Students will have knowledge in planning the effectiveness of auditing and also internal check, internal audit and internal control.

CO4; Students will have proper understanding of the requirements of documentary evidence for the completion of Vouching and Investigation.

CO5: Students will have the knowledge in Company Audit and Auditors Report

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SEMESTER -VI

SYLLABUS

Auditing

Unit-I: Auditing: Meaning – Objectives – Importance of Auditing – Auditing as a Vigil Mechanism – Role of Auditor in checking corporate frauds.

Unit-II: Types of Audit: Based on Ownership and time - Independent, Financial, Internal, Cost, Tax, Government, Secretarial audits

Unit-III: Planning of Audit: Steps to be taken at the commencement of a new audit - Audit programme - Audit note book - Internal check, internal audit and internal control.

Unit-IV: Vouching and Investigation: Vouching of cash and trading transactions - Investigation, Auditing vs. Investigation

Unit-V: Company Audit and Auditors Report: Auditor's Qualifications – Appointment and Reappointment – Rights, duties, liabilities and disqualifications - Audit report: Contents – Preparation - Relevant Provisions of Companies Act, 2013.

References:

1. S.Vengadamani, “Practical Auditing”, Margham Publications, Chennai.
2. Ghatalia, “Principles of Auditing”, Allied Publishers Pvt. Ltd., New Delhi.
3. Pradeesh Kumar, Baldev Sachdeva & Jagwant Singh, “Auditing Theory and Practice, Kalyani Publications, Ludhiana.
4. N.D. Kapoor, “Auditing”, S. Chand, New Delhi.
5. R.G. Saxena, “Principles and Practice of Auditing”, Himalaya Publishing House, New Delhi.
6. Jagadesh Prakesh, “Principles and Practices of Auditing” Kalyani Publications, Ludhiana.

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SEMESTER -VI

Model Paper
Auditing

TIME -3hrs

Max. Marks: 75

SECTION -A

I. Answer any THREE of the following question

3 x 5= 15M

1. Explain the scope of audit
2. Corporate Frauds
3. Government Audit
4. Audit note book
5. Characteristics of Investigation.
6. Audit Report

SECTION -B

II. Answer any FOUR of the following questions

4x15=60M 7.

Define auditing .Explain its features and its advantages.

8. What are the various types of audits classified on the basis of organization Structure?
9. What is audit programme. Explain its advantages and disadvantages
10. What is internal control .Explain its advantages and disadvantages
11. “Vouching is the essence of auditing”. Explain
12. Explain the difference between Investigation and auditing
13. Explain the rights and duties of an auditor.
14. Explain different types of Audit Reports

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SEMESTER -VI

Guidelines to the paper setter

Auditing

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Auditing	Types of Audit	Planning of Audit	Vouching and Investigation	Company audit and Auditors Reports
5Marks	2	1	1	1	1
15Marks	1	1	2	2	2
Weight age	25	20	35	35	35

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EMESTER-VI

MANAGEMENT ACCOUNTING

Objective:

To acquire knowledge about management accounting its applications, ratios and CVP analysis.

To acquire knowledge about preparation of various financial statements

COURSE OUTCOMES

CO1 – Students will critically understanding the financial and management accounting importance in understanding the business operations using different tools

CO2 – Students will understand the importance of changes of working capital for any Organisation and analysing the flow of fund

CO3 – Students will critically understanding the cash and fund flow concept and impact of cash flow on business operations

CO4 - Students will have the ability of assessing the solvency and profitability of any Organisation

CO5- Students will understand the profit making decisions in complex situations of any business Organisation

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SEMESTER -VI

SYLLABUS

Management Accounting

Unit–I: Management Accounting: Interface with Financial Accounting and Cost Accounting - Financial Statement analysis and interpretation: Comparative analysis – Common size analysis and trend analysis (including problems).

Unit–II: Ratio Analysis: Classification, Importance and limitations - Analysis and interpretation of Accounting ratios - Liquidity, profitability, activity and solvency ratios (including problems).

Unit–III: Fund Flow Statement: Concept of fund: Preparation of funds flow statement. Uses and limitations of funds flow analysis (including problems).

Unit–IV: Cash Flow Statement: Concept of cash flow – Preparation of cash flow statement – Uses and limitations of cash flow analysis (including problems).

Unit–V: Break-Even Analysis and Decision Making: Calculation of Break-even point - Uses and limitations - Margin of safety – Make/Buy Decision - Lease/own Decision (including Problems).

References:

1. S.N. Maheswari, A Textbook of Accounting for Management, S. Chand Publishing, New Delhi.
2. I.M Pandey, “Management Accounting”, Vikas Publishing House, New Delhi,
3. Shashi K. Gupta & R.K. Sharma, “Management Accounting: Principles and Practice”, Kalyani Publishers, Ludhiana.
4. Jawahar Lal, Accounting for Management, Himalaya Publishing House, New Delhi.
5. Charles T. Horngren, *et.al*, “Introduction to Management Accounting” Person EducationIndia, New Delhi, 2002.

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SEMESTER -VI

SYLLABUS

Management Accounting

Time: 3hrs

Max.Marks:75

SECTION – A

I. Answer any THREE from the following:

3x5=15M

1. Explain common – size statements
2. What are the uses of management accounting?
3. Describe the importance ratios
4. Define a fund flow statement.
5. How will you calculate cash from operations?
6. M O S

SECTION – B

II. Answer any TWO from the following:

4x15=60M

7). Following are the two balance sheets of 'A' LTD and 'B' LTD on 31-3-2008.

Particulars	'A' ltd (Rs.)	'B' ltd. (Rs.)
Assets:		
Cash	27	72
Sundry debtors	220	226
Stock	100	174
Prepaid expenses	11	21
Other current assets	10	21
Fixed assets (net)	635	513
Total assets	1003	1027
Liabilities & capital:		
Sundry creditors	42	154
Other current liabilities	78	62
Fixed liabilities	225	318
Capital	658	493
Total liabilities	1003	1027

From the above data, prepare a common-size statement and make comments

8).The following is the Balance sheet of Bhubaneswar Ltd., as on 30th June ,2008:

Liabilities	Rs.	Assets	Rs.
Equity share capital	3,00,000	Fixed assets	6,00,000
9% Pre f, share capital	1,00,000	Investments	50,000
10% Debentures	2,00,000	Current assets	2,50,000
Reserves and surplus	50,000		
Long- term Loans	25,000		
Current liabilities	2,25,000		
	9,00,000		9,00,000

You are required to calculate:

- (a) Debt- equity ratio (long-term debt equity).
- (b) Proprietary Ratio
- (c) Solvency Ratio.
- (d) Fixed assets to proprietor's funds ratio.
- (e) Fixed assets ratio.
- (f) Current assets to proprietor's funds ratio.

9). From the following two balance sheets as on 31st December 2006 and 2007, you are required to prepare Statement showing flow of funds :

Particulars	2006 Rs.	2007 Rs.
Assets:		
Cash	30,000	47,000
Debtors	1,20,000	1,15,000
Stock – in- trade	80,000	90,000
Land	50,000	66,000
	2,80,000	3,18,000
Capital and liabilities:		
Share capital	2,00,000	2,50,000
Trade creditors	70,000	45,000
Retained earnings	10,000	23,000
	2,80,000	3,18,000

10). Define a cash flow statement. Distinguish between ‘funds flow’ and ‘cash flow’.

11). X LTD, made a profit of Rs.18,00,000 for the year ended 31st march, 2008 after considering the following:

	Rs.
Depreciation on Building	52,000
Depreciation on plant and machinery	35,000
Transfer to general reserve	10,000
Good will written off	8,000
Plant and machinery having book value of Rs.14,000 was sold for	10,000
Profit on sale of investments	7,000

The following was the position of Current Assets and Current Liabilities of the company as on 31st march , 2007 and 31 march , 2008.

	31 st march 2007 Rs.	31 st march 2008 Rs.
Debtors	45,000	35,000
Stock	72,000	80,000
cash	12,000	21,000
creditors	56,000	62,000
outstanding expenses	7,000	5,000
Prepaid expenses	4,000	5,000
Bills payable	11,000	15,000

Calculate cash flows from operating activities.

12). From the following information pertaining to the two years, calculate.

- (a) P/V ratio
- (b) Amount of sales to earn profit of Rs 40, 000
- (c) Profit on sales Rs.1, 20,000.

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

13). Following are the balance Sheets of sun star Industries Ltd . for the years ending December 31, 2006 and 2007

Liabilities	2006 RS	2007 RS	Assets	2006 RS	2007 RS
Equity share capital	4,00,000	6,00,000	Land & Buildings	2,70,000	1,70,000
Reserves & surplus	3,12,000	3,54,000	Plant & Machinery	3,10,000	7,86,000
Debentures	50,000	1,00,000	Furniture & Fixture	9,000	18,000
Long – term loans on Mortgage	1,50,000	2,55,000	Other Fixed assets	20,000	30,000
Accounts Payable	2,55,000	1,17,000	Long – term Loans	46,000	59,000
Other Current Liabilities	7,000	10,000	Cash in hand and at Bank	1,18,000	10,000
			Receivables	2,09,000	1,90,000
			Inventory	1,60,000	1,30,000
			Prepared Expenses	3,000	3,000
			Other current assets	29,000	40,000
	11,74,000	14,36,000		11,74,000	14,36,000

Analyze the Financial position of the company with the help of Comparative Balance sheet

14). From the given information calculate

- (a) B.E.P
- (b) Sales to earn a profit of Rs.1, 00,000
- (c) Margin of safety where. Sales are Rs10, 00,000
 - Total sales 6, 00,000
 - Total variable costs 4, 00,000
 - Total fixed costs 50,000

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

<i>Commerce</i>	<i>CMA 604GE G/C</i>	<i>2019-2020</i>	<i>B.Com(gen/comp)</i>
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SEMESTER -VI

SYLLABUS

Management Accounting

Guidelines to the paper setter

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Management Accounting	Ratio Analysis	Fund Flow Statement	Cash Flow Statement	Break-Even Analysis and Decision Making
5Marks	2	1	1	1	1
15Marks	2	1	1	2	2
Weightage	40	20	20	35	35

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Commerce	CFS-605 CE G/C	2019-2020	<i>III.B.Com(gen)</i>
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SEMESTER-VI

FINANCIAL SERVICES

Objective:

To acquire knowledge about various financial services offered by banking and non-banking companies

Students will develop an idea of recent trends in financial services

COURSE OUTCOMES

CO1 – Students can impart knowledge about various financial services offered by banking and non-banking companies

CO2 – Students can understand various merchant banking services

CO3 – To know emergence and development of financial services in leasing and hire-purchase

CO4 – Students will acquire the knowledge of various credit rating agencies and concept of mutual funds

CO5- To understand the various financial services and their future

Commerce	CFS 605 CE G/C	2019-2020	B.Com(gen)
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SEMESTER -VI

SYLLABUS

Financial Services

Unit-I: Financial Services: Role of Financial Services - Banking and Non Banking Companies – Activities of Non Banking Finance Companies- Fund Based Activities - Fee Based Activities .

Unit-II: Merchant Banking Services: Scope and importance of merchant banking services - Venture Capital - Securitization - Demat services - Commercial Papers – Treasury bills

Unit-III: Leasing and Hire-Purchase: Types of Lease, Documentation and Legal aspects – Fixation of Rentals and Evaluation - Hire Purchasing- Securitization of debts - House Finance.

Unit-IV: Credit Rating: Purpose – Types – Credit Rating Symbols – Agencies: CRISIL and CARE – Equity Assessment vs. Grading – Mutual funds.

Unit-V: Other Financial Services: Factoring and Forfaeiting - Procedural and financial aspects – Installment System - Credit Cards - Central Depository Systems: NSDL, CSDL.

References:

1. B. Santhanam, Financial Services, Margham Publication, Chennai.
- 2.M.Y. Khan, Financial Services, Tata McGraw – Hill, New Delhi.
3. Machendra Raja, Financial Services, S.Chand Publishers, New Delhi.
4. V. A. Avdhani, Marketing of Financial Services.
5. Machiraji, “Indian Financial System”, Vikas Publishers.
6. Sandeep Goel, Financial Services, PHI Learning.
7. L.M. Bhole, Financial Institutions and Markets, Tata McGraw Hill.

<i>Commerce</i>	<i>CFS 605 CE G/C</i>	<i>2019-2020</i>	<i>B.Com(gen)</i>
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SEMESTER -VI
Model paper
Financial Services

TIME -3hrs

Max. Marks: 75

SECTION -A

I. Answer any THREE of the following question

3 x 5= 15M

1. What are Banking Companies?
2. What are Fund based activities
3. What is Venture Capital?
4. Hire Purchasing.
5. CRISIL.
6. NSDL.

SECTION -B

II. Answer any Four of the following questions

4x15=60M

7. Explain the role of Financial Services
8. Explain the activities of Non Banking Finance Companies
9. Explain the Scope and Importance of Merchant Banking
10. Explain Demat services and Securitization
11. Explain the Types of Leases
12. Explain Different Credit rating agencies
13. Describe about Mutual funds
14. What are Central Depository Systems?

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<i>Commerce</i>	<i>CFS 605 CE G/C</i>	<i>2019-2020</i>	<i>B.Com(gen)</i>
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SEMESTER -VI

Guidelines to the paper setter

Financial Services

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Financial Services	Merchant Banking Services	Leasing and Hire-Purchase	Credit Rating	Other Financial Services
5Marks	2	1	1	1	1
15Marks	2	2	1	2	1
Weightage	40	35	20	35	20

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Commerce	CMFS-606 CE G/C	2019-2020	<i>III.B.Com(gen)</i>
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SEMESTER-VI

MARKETING OF FINANCIAL SERVICES

Objectives:

To acquire knowledge about various financial services offered by banking and non-banking companies

Students are able to learn basic concepts in marketing of financial services And environment

COURSE OUTCOMES

CO1 – Students are able to learn basic concepts in marketing of financial services

CO2 –Students are able to learn the concepts of service environment

CO3 –Students are able to impart knowledge about pricing strategies and promotion strategies

CO4 – Students can impart knowledge regarding promotion and distribution

CO5 –Students can impart knowledge about various retail financial services

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DA)

<i>Commerce</i>	<i>CMFS 606 CE G/C</i>	<i>2019-2020</i>	<i>B.Com(gen)</i>
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SEMESTER -VI

SYLLABUS

Marketing of Financial Services

Unit-I: Difference between Goods and Services: Managing Service Counters – Integrated Service Management – Service Elements.

Unit-II: Constructing Service Environment – Managing People for service Advantage – Service Quality and Productivity – Customer Loyalty.

Unit-III: Pricing and Promotion Strategies: Pricing strategies – Promotion strategies – B2B Marketing – Marketing Planning and Control for services.

Unit-IV: Distributing Services: Cost and Revenue Management – Approaches for providing services - Channels for Service provision – Designing and managing Service Processes.

Unit-V: Retail Financial Services - Investment services – Insurance services - Credit Services - Institutional Financial Services - Marketing practices in select Financial Service Firms.

References:

1. Aradhani “Marketing of Financial Services” Himalaya Publications
2. Sinha and Saho, Services Marketing, Himalaya Publishing House
3. Reddy Appanaiah, Anil Kumar and Nirmala, Services Marketing, Himalaya Publishing.
4. Shajahan, Services Marketing, Himalaya Publishing House.

<i>Commerce</i>	<i>CMFS 606 CE G/C</i>	<i>2019-2020</i>	<i>B.Com(gen)</i>
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SEMESTER -VI

Model paper

Marketing of Financial Services

TIME -3hrs

Max. Marks: 75

SECTION -A

I. Answer any THREE of the following question

3 x 5= 15M

1. What are the service elements?
2. Customer loyalty
3. Marketing Planning
4. Designing and Managing service process
5. Investment services
6. Credit services

SECTION -B

II. Answer any Four of the following questions

4x15=60M

7. Describe Managing Service Counters
8. Explain Service Quality and Productivity
9. Explain different Pricing strategies
10. Explain B2B Marketing
11. What are the different approaches for providing services?
12. What are the advantages of Cost and Revenue Management?
13. Explain Institutional Financial Services
14. Explain different Service Elements

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<i>Commerce</i>	<i>CMFS 606 CE G/C</i>	<i>2019-2020</i>	<i>B.Com(gen)</i>
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SEMESTER - VI

Guidelines to the paper setter

Marketing of Financial Services

Marks	UNIT-I	UNIT-II	UNIT-III	UNIT-IV	UNIT-V
	Difference between Goods and Services	Constructing Service Environment	Pricing and Promotion Strategies	Distributing Services	Retail Financial Services
5Marks	1	1	1	1	2
15Marks	2	1	2	2	1
Weightage	35	20	35	35	25

PROJECT WORK COM 607P for Cluster Elective students

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

Science Vuyyuru-521165, Krishna Dist.

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LEADERSHIP EDUCATION LEP404

SYLLAUBUS (SEMESTER-IV)

1. **Organisation-Management-Leadership-Meaning and significance-different theories-trait theory, black&mountan theory-other functions of management.**
2. **Behavioral concepts-individual behavior-perception-learning-attitude formation and change-motivation-theories of motivation-personality development.**
3. **Interpersonal behavior-communication-leadership-influencing-relations-transactional analysis.**
4. **Group dynamics-roles-morale-conflict-group-inter-group behavior-inter-group collaboration and conflict management.**
5. **Team building and management-developing team resources-designing team-participation and repercussion-team building**

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SEMESTER - IV

COURSE CODE: LEP-404

PAPER TITLE : LEADER SHIP EDUCATION

IIB.A.,B.COM.,B.SC.,

MODEL QUESTION PAPER

SEMESTER-IV COURSECODE: LEP-404

PAPERTITLE: LEADER SHIP EDUCATION

Duration : 2 Hours

Maximum Marks : 50

Pass Marks : 20

SECTION-A

I. Answer any **Four** of the following questions.

4 x 5=20 Marks

1. Define organization?
2. Define management?
3. What is learning?
4. What is motivation?
5. Explain about verbal communication ?
6. Write about non verbal communication?
7. What is conflict?
8. what is team building activities ?

SECTION- B

II. Answer any **Three** of the following questions.

3x10=30Marks

9. What is leader ship? Discuss its importance.
10. What are the Principles of management ? Discuss in detail

11. Discuss Motivation concept and its characteristics ?

12. What is communication ? Explain process of communication?

13. Discuss the importance of group dynamic concepts.

14. What is team building? What are the approaches of team building.

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The guidelines to be followed by the question paper setters in leadership for the IV semester-end exams (2017 - 2018)

Paper title : leadership Education

II B.A., B.COM., B.SC.,

Semester-IV

Maximum Marks : 50

Duration:2 Hours

Weight age for the question paper

SYLLABUS	SECTION-A (short questions) 5 Marks	SECTION-B (essay questions) 10 Marks
Unit-1 (30 Marks)	2	2
Unit-2 (20 Marks)	2	1
Unit-3 (20 Marks)	2	1
Unit-4 (15 Marks)	1	1
Unit-5 (15 Marks)	1	1
TOTAL Questions	8	6

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

Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF COMPUTER SCIENCE

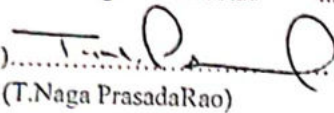
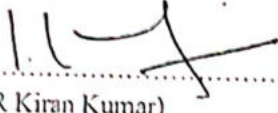
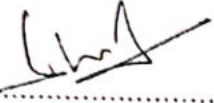
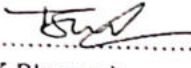
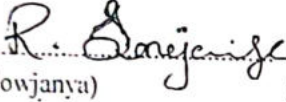

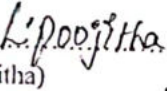

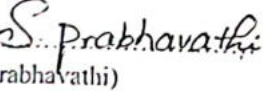
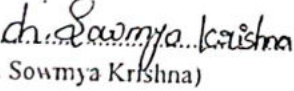
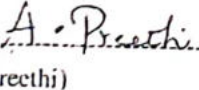
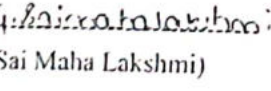
MINUTES OF BOARD OF STUDIES

EVEN SEMESTER

29-10-2019

Minutes of the meeting of Board of Studies in Computer Science for II B.Sc.(MPCs, MCCs), B.Com.(C.A.) and Foundation Course of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 10.30 A.M on 29-10-2019 in the Department of Computer Science.

Sri T.Naga PrasadaRao ... Presiding

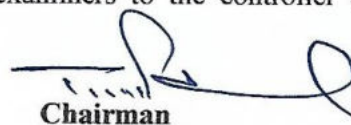
- | | | <u>Members Present:</u> |
|---|--------------------------------|---|
| 1)..... 
(T.Naga PrasadaRao) | Chairman | Head, Department of Computer Science
AG & SG Siddhartha Degree College of Arts & Science,
Vuyyuru-521165 |
| 2)..... 
(Dr. R Kiran Kumar) | University
Nominee | Professor,
Dept of Computer Science,
Krishna University, Machilipatnam. |
| 3)..... 
(Dr. Suresh Sundaradasu) | Academic
Council
Nominee | Head, Department of Computer Science & Engineering,
Dhankula Institute of Engineering & Technology,
Ganguru, JNTU(K), Vijayawada. |
| 4)..... 
(Dr. K Bhagvan) | Academic
Council
Nominee | Professor, Department of Computer Science
K.B.N College,
Vijayawada. |
| 5)..... 
(R. Sowjanya) | Industrial
Expert | .Net Developer,
Mavensoft Systems Private limited
Madaapur, Hyderabad. |
| 6)..... 
(K Srikanth) | Member | Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165. |
| 7)..... 
(L.Pujitha) | Member | Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165 |
| 8)..... 
(A. Sravani) | Member | Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165 |
| 9)..... 
(S.Prabhavathi) | Member | Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165 |
| 10)..... 
(Ch. Sowmya Krishna) | Member | Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165 |
| 11)..... 
(A.Preethi) | Member | Student in M.Sc. Computer Science, AG& SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165 |
| 12)..... 
(G. Sai Maha Lakshmi) | Member | 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 II semester of I year, IV Semester of II year Degree B.Sc. (MPCs, MCCs.), B.Com (C.A.), & VI Semester of III year Degree B.Sc.(MCCs) Courses under Choice Based Credit System With Effect From Academic Year 2019-20.
2. To recommend the Model Question Papers, Lab programs list and Blue print of II semester of I year, IV Semester of II year Degree B.Sc.(MPCs, MCCs.), B.Com (C.A.), & VI Semester of III year Degree B.Sc.(MCCs) Courses under Choice Based Credit System With Effect From Academic Year 2019-20.
3. To recommend the Guidelines to be followed by the question paper setters in Computer Science for II semester of I year, IV Semesters of II year Degree B.Sc.(MPCs, MCCs.), B.Com (C.A.) & VI Semester of III year Degree B.Sc.(MCCs) Courses under Choice Based Credit System With Effect From Academic Year 2019-20.
4. To recommend any changes in the syllabi for II, IV, VI Semesters of I, II, III year Degree B.Sc.(MPCs, MCCs) and B.Com.(C.A.).
5. To recommend the teaching and evaluation methods to be followed under Autonomous status.
6. To recommend the certificate courses for all Computer Science and Non-Computer Science students any suggestions regarding seminars, workshops, Guest lecturers to be organized.
7. To recommend the panel of paper setters and examiners to the controller of the examinations of autonomous courses of AG & SG Siddhartha Degree College of Arts & Science College, Vuyyuru.
8. Discuss and recommend to introduce a Certificate course in "Computer Fundamentals & MS Office"
9. Any other matter.

Resolutions

- 1) Discussed and recommended as per the APSCHE guidelines and their instructions it is resolved to implement syllabi for II semester of I year, IV Semester of II year Degree B.Sc.(MPCs, MCCs.), B.Com (C.A.), & VI Semester of III year Degree B.Sc.(MCCs) Courses under Choice Based Credit System with Effect from Academic Year 2019-20.
- 2) Discussed and recommended as per the APSCHE guidelines and their instructions it is resolved to implement Model Question Papers, Lab Programs List and blue print for II semester of I year, IV Semester of II year Degree B.Sc.(MPCs, MCCs.), B.Com (C.A.), & VI Semesters of III year Degree B.Sc.(MCCs) Courses under Choice Based Credit System with Effect from Academic Year 2019-20.
- 3) Discussed and recommended the guidelines to be followed by Question Paper Setters in Computer Science for II semester of I year, IV Semester of II year Degree B.Sc.(MPCs, MCCs.), B.Com (C.A.), & VI Semesters of III year Degree B.Sc.(MCCs) Courses under Choice Based Credit System With Effect From Academic Year 2019-20.
- 4) Discussed and recommended the NO changes appeared as per previous paper in the syllabi ,Question Paper & Lab Cycle for
 - **II Semester of I Year B.Sc. (MPCs, MCCs) & B.Com.(CA).**
 - **IV Semester of II Year B.Sc. (MPCs,MCC's) & B.Com.(CA).**
 - **VI Semester of III Year B.Sc. (MPCs) & B.Com.(CA).**
 - **Foundation Course for All Degree Courses under Choice Based Credit System with Effect from Academic Year 2018-19.**
- 5) Discussed and recommended the teaching and evaluation methods for approval of Academic Council.
- 6) Discussed and recommended for organizing Seminars, Guest lectures, Work-shops to upgrade the knowledge of students, for the approval of the Academic Council. Discussed and recommended to conduct certificate courses for Computer Science and Non-Computer Science students separately.
- 7) **Discussed and recommended to introduce Certificate Course on "Basic Computer Applications & MS Office" with course code "BCAM102" for I MPC's.**
- 8) **Discussed and recommended to introduce Certificate Course on "Hardware and Networking" with course code "HANCC12" for II MPC's,MCC's,MPC,B.COM(CA).**
- 9) **Discussed and recommended to introduce Certificate Course on "AWS" with course code "CAWS-01" for III MPC's ,MCC's & III B.COM(CA)**
- 10) It is resolved to suggest the panel of the paper setters and examiners to the controller of the examinations.


 Chairman

AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYURU.
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(With Effect from Academic Year 2018-'19)

COMPUTER SCIENCE	CSC-201C	2019-20	B.Sc. (MPCs, MCCs.)
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SEMESTER – II PAPER – II Max. Marks 70 Pass Marks 28 Total Hrs: 60

Syllabus PROGRAMMING IN C NO. Of. Hours: 4 Credits: 3

UNIT I **15Hrs**

Introduction to Algorithms and Programming Languages: Algorithm – Key features of Algorithms - Some more Algorithms – Flow Charts – Pseudo code – Programming Languages – Generation of Programming Languages – Structured Programming Language.

Introduction to C: Introduction – Structure of C Program – Writing the first C Program –File used in C Program – Compiling and Executing C Programs – Using Comments – Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C- Operators in C- Programming Examples – Type Conversion and Type Casting

UNIT II **15Hrs**

Decision Control and Looping Statements: Introduction to Decision Control Statements –Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Goto Statement **Functions:** Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables –Storage Classes Recursive functions – Type of recursion – Towers of Hanoi – Recursion vs Iteration

UNIT III **10Hrs**

Arrays: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array – Calculating the length of the Array – Operations on Array – one dimensional array for inter-function communication – Two dimensional Arrays –Operations on Two Dimensional Arrays - Two Dimensional Arrays for inter-function communication – Multidimensional Arrays – Sparse Matrices

Strings: Introduction –Suppressive Input – String Taxonomy – String Operations – Miscellaneous String and Character functions

UNIT IV **10Hrs**

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Pointer Expressions and Pointer Arithmetic – Null Pointers – Generic Pointers - Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function – Difference between Array Name and Pointer – Pointers and Strings – Array of pointers – Memory Allocation in C Programs – Memory Usage – Dynamic Memory Allocation – Drawbacks of Pointers

Structure, Union, and Enumerated Data Types: Introduction – Nested Structures – Arrays of Structures – Structures and Functions – Self referential Structures – Union – Arrays of Unions Variables – Unions inside Structures – Enumerated Data Types

UNIT V **10Hrs**

Files: Introduction to Files – Using Files in C – Reading Data from Files – Writing Data from Files – Detecting the End-of-file – Error Handling during File Operations – Accepting Command Line Arguments – Functions for Selecting a Record Randomly - Remove() – Renaming a File – Creating a Temporary File

REFERENCE BOOKS

1. Introduction to C programming by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. E Balagurusamy: —COMPUTING FUNDAMENTALS & C PROGRAMMING – Tata McGraw-Hill, Second Reprint 2008, ISBN 978-0-07-066909-3.
3. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002.
4. Henry Mullish & Huubert L.Cooper: The Spirit of C An Introduction to modern Programming, Jaico Pub. House,1996.

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COMPUTER SCIENCE	CSC-201C	2019-20	B.Sc.(MPCs, MCCs.)
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SEMESTER – II PAPER – II Max. Marks 70 Pass Marks 28

Syllabus PROGRAMMING IN C NO. Of. Hours: 4 Credits: 3

Section- A

Answer FOUR Questions. Each Question carries FOUR Marks.

4*5=20M

1. Write a short note on Flowchart?
2. Explain about input and output Statements?
3. Explain storage classes?
4. Explain one dimensional array with example?
5. Explain dynamic memory allocation?
6. How to open a file?

Section- B

Answer FIVE the Questions. Each Question carries EIGHT Marks

5*10=50M

7. Explain different types of programming languages?
8. Explain about different Categories of Operators in 'C'?
9. Explain decision making Looping statements with examples?
10. Explain different categories of functions?
11. Write about two dimension arrays? Give an example program?
12. Explain briefly about string function in 'C'?
13. Difference between structures and unions?
14. Explain different file modes?

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SEMESTER – II

PAPER – II

Max. Marks 75

Guidelines for paper setting '**PROGRAMMING IN C**'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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COMPUTER SCIENCE	CSC-201P	2019-'20	B.Sc.(MPCs, MCCs.)
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SEMESTER – II PAPER – II Max. Marks 50 Pass Marks 25

LABLIST

PROGRAMMING IN C

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

1. Find out the given number is perfect number or not using c program.
2. Write a C program to check whether the given number is Armstrong or not.
3. Write a program to find roots of quadratic equation.

$$\text{Root 1} = \frac{-b + \sqrt{b^2 - 4ac}}{2a} \quad \text{Root 2} = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$$
4. Write a C program to find the sum of individual digits of a positive integer.
5. Write a C program to print the Fibonacci series
6. Write a C program to generate the first n terms of the Fibonacci sequence.
7. Write a program to find factorial of a given number using recursion
8. Write a program to perform all arithmetic operations using switch case
9. Write a C program to generate all the prime numbers between 1 and n, where n is a Value supplied by the user.
10. Write a C program to find both the largest and smallest number in a list of integers.
11. Write a C program that uses functions to perform the following:
 - a. Addition of Two Matrices
 - b. Multiplication of Two Matrices
12. Write a program to perform various string operations
13. Write a program to swap two numbers using pointers.
14. Write C program that implements searching of given item in a given list
15. Write a C program to sort a given list of integers in ascending order

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SEMESTER –II PAPER – II Max. Marks 70 Pass Marks 28 Totals Hrs 60

Syllabus: ENTERPRISE RESOURCE PLANNING NO. Of. Hours: 5 Credits: 4

Unit-I: Introduction: 12Hrs

Overview of enterprise systems – Evolution - Risks and benefits - Fundamental technology - Issues to be consider in planning design and implementation of cross functional integrated ERP systems.

Unit- II: ERP Solutions and Functional Modules: 12Hrs

Overview of ERP software solutions- Small, medium and large enterprise vendor solutions, BPR and best business practices - Business process Management, Functional modules.

Unit-III: ERP Implementation: 12Hrs

Planning Evaluation and selection of ERP systems -Implementation life cycle - ERP implementation, Methodology and Frame work- Training – Data Migration - People Organization in implementation- Consultants, Vendors and employees.

Unit-IV: Post Implementation: 10Hrs

Maintenance of ERP- Organizational and Industrial impact; Success and Failure factors of ERP Implementation.

Unit-V: Emerging Trends on ERP: 14Hrs

Extended ERP systems and ERP add-ons -CRM, SCM, Business analytics - Future trends in ERP systems-web enabled, Wireless technologies, cloud computing.

References:

1. Alexis Leon, ERP demystified, second Edition Tata McGraw-Hill, 2008.
2. Sinha P. Magal and Jeffery Word, Essentials of Business Process and Information System, Wiley India, 2012
3. Jagan Nathan Vaman, ERP in Practice, Tata McGraw-Hill, 2008
4. Alexis Leon, Enterprise Resource Planning, second edition, Tata McGraw-Hill, 2008.
5. Mahadeo Jaiswal and Ganesh Vanapalli, ERP Macmillan India, 2009
6. Vinod Kumar Grag and N.K. Venkitakrishnan, ERP- Concepts and Practice, PHI, 2006.
7. Summer, ERP, Pearson Education, 2008

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SEMESTER – II PAPER – II Max. Marks 70 Pass Marks 28

Model Paper Enterprise Resource Planning NO Of Hours: 5 Credits: 4

Section- A

Answer FOUR Questions. Each Question carries FIVE Marks.

4*5=20M

1. Explain the Overview of ERP?
2. Write a short note on Small, Medium Business Vendor solution?
3. Explain Data Migration?
4. Explain Methodology and Frame work of ERP Implementation?
5. Explain Organizational impact on maintains of ERP?
6. Explain cloud computing?

Section- B

Answer FIVE the Questions. Each Question carries EIGHT Marks.

5*10=50M

7. Explain Evolution of ERP.
8. Advantages and disadvantages of ERP.
9. Explain about functional Modules in ERP
10. Explain about Implementation life Cycle
11. Explain people Organisation in ERP implementation
12. Explain success and failure factors of ERP Implementation
13. Explain about Consumer Relation Ship Management (CRM) & Supply Chain Management (SCM)?
14. What are future trends in ERP system?

(With Effect from Academic Year 2018-'19)

COMPUTER SCIENCE	COM-CSC-203	2019-'20	B.Com.(C.A)
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SEMESTER – II

PAPER – II

Max. Marks 75

Guidelines for paper setting 'ENTERPRISE RESOURCE PLANNING'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	1	2
Unit-2	1	1
Unit-3	2	2
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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COMPUTER SCIENCE

ICT-I-201

2019-'20

B.A, B.Com, B.Sc.

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

Syllabus Computer Fundamentals & Office Tools NO. Of Hrs: 2 Credits: 2

Unit-I : Basics of Computers**6 Hrs**

Definition of a Computer - Characteristics and Applications of Computers – Block Diagram of a Digital Computer – Classification of Computers based on size and working Central Processing Unit – Input, Output and I/O Devices

Unit-II: Memory Devices & Operating Systems**6Hrs**

Primary, Auxiliary and Cache Memory – Memory Devices – Software, Hardware, Firmware and People ware –Definition and Types of Operating System – Functions of an Operating System – MS-DOS MS-Windows – Desktop, Computer, Documents, Pictures, Music, Videos, Recycle Bin, Task Bar – Control Pane

Unit-III: MS-Word**6 Hrs**

Features of MS-Word – MS-Word Window Components – Creating, Editing, Formatting and Printing of Documents – Headers and Footers – Insert/Draw Tables, Table Auto format – Page Borders and Shading – Inserting Symbols, Shapes, Word Art, Page Numbers, Equations – Spelling and Grammar – Thesaurus – Mail Merge

Unit-IV: MS-PowerPoint**6 Hrs**

Features of PowerPoint – Creating a Blank Presentation - Creating a Presentation using a Template - Inserting and Deleting Slides in a Presentation – Adding Clip Art/Pictures - Inserting Other Objects, Audio, Video - Resizing and Scaling of an Object – Slide Transition – Custom Animation

Unit-V : MS-Excel**6 Hrs**

Overview of Excel features – Creating a new worksheet, Selecting cells, Entering and editing Text, Numbers, Formulae, Referencing cells – Inserting Rows/Columns – Changing column widths and row heights, auto format, changing font sizes, colors, shading and attributes – Data Sorting and Filters – Functions – Functions requiring Addins, Functions by category Creating different types of Charts

Reference Books :

1. Fundamentals of Computers by V.Raja Raman, Publishers : PHI
2. Fundamentals of Computers by Reema Thareja, Publishers : Oxford University Press, India
3. Microsoft Office 2010 Bible by John Walkenbach, Herb Tyson, Michael R.Groh and Faithe Wempen, Publishers : Wiley

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COMPUTER SCIENCE

ICT-I-201C

2019-'20

B.A, B.Com, B.Sc.

SEMESTER – II

PAPER – I Max. Marks 50

Pass Marks 20

Model paper Computer Fundamentals & Office Tools NO. Of Hrs: 2 Credits: 2**SECTION-A**Answer **FOUR** of the following questions

4x5=20M

1. Explain characteristics of Computer?
2. Explain any five Input devices?
3. Write about Desktop, Computer, Documents, Recycle Bin?
4. Explain about Cache Memory?
5. Explain inserting Headers and Footers in MS-Word?
6. How to Insert/Draw table in MS-Word?
7. Inserting and Deleting slides in presentation?
8. Explain inserting charts in MS-Excel?

SECTION-BAnswer **THREE** of the following questions

3X10=30M

9. Explain Block diagram of a Digital Computer?
10. Explain Classification of Computers?
11. Explain Computer Memory?
12. Explain MS-Word Window Components with neat Diagram?
13. Creating power point presentation using Template?
14. Explain Excel Functions

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SEMESTER – II	PAPER – I		Max. Marks 50

Guidelines for paper setting '**COMPUTER FUNDAMENTALS & OFFICE 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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COMPUTER SCIENCE

CSC-401C

2019-'20

B.Sc.(MPCs. , MCCs.)

SEMESTER – IV PAPER – IV Max. Marks 75 Pass Marks 30 Total Hrs 60

Syllabus

DATA STRUCTURES

NO Of Hours: 4

Credits: 4

UNIT I**15 Hrs**

Concept of Abstract Data Types (ADTs)- Data Types, Data Structures, Storage Structures, and File Structures, Primitive and Non-primitive Data Structures, Linear and Non-linear Structures. **Linear Lists** - ADT, Array and Linked representations, Pointers.

Arrays - ADT, Mappings, Representations, Sparse Matrices, Sets - ADT, Operations Linked Lists: Single Linked List, Double Linked List, Circular Linked List, applications

UNIT II**10 Hrs**

Stacks: Definition, ADT, Array and Linked representations, Implementations and Applications

Queues: Definition, ADT, Array and Linked representations, Circular Queues, De-queues, Priority Queues, Implementations and Applications.

UNIT III**15 Hrs**

Trees: Binary Tree, Definition, Properties, ADT, Array and Linked representations, Implementations and Applications. Binary Search Trees (BST) - Definition, ADT, Operations and Implementations, BST Applications. Threaded Binary Trees, Heap trees

UNIT IV**10Hrs**

Graphs – Graph and its Representation, Graph Traversals, Connected Components, Basic Searching Techniques, Minimal Spanning Trees

UNIT- V**10 Hrs**

Sorting and Searching: Selection, Insertion, Bubble, Merge, Quick, Heap sort, Sequential And Binary Searching.

TEXT BOOKS

1. Hubbard John R. and Hurray Anita, Data Structures with Java Paperback Prentice-Hall 2005 ISBN-10: 8120327454
2. Samanta D, Classic Data Structures, Prentice-Hall of India, 2001.
3. David Cousins, Introducing Data Structures with Java Kindle Edition, Pearson Education; First edition, 2011, ISBN-10: 8131758648, 464 pages

REFERENCE BOOKS

1. Sahani S, Data Structures, Algorithms and Applications in C++, McGraw-Hill, 2002
2. D S Malik, Data Structures Using C++, Thomson, India Edition 2006
3. Tremblay P, and Sorenson P G, Introduction to Data Structures with Applications, Tata McGraw-Hill,

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SEMESTER – IV PAPER – IV Max. Marks 75 Pass Marks 30 Total Hrs 60

Model Paper DATA STRUCTURES NO Of Hours: 4 Credits: 3

Section- A

Answer **FIVE** Questions. Each Question carries FIVE Marks. 5*5=25M

1. Explain about Primitive & Non primitive Data Structures?
2. Explain about Single Linked List?
3. Write about Applications of Stack?
4. Explain about D-Queue?
5. Write a Short note on Binary tree?
6. Explain ADT?
7. What is Graph? How to represent the Graph
8. Write a program to sort the elements in bubble sort?

Section- B

Answer **FIVE** the Questions. Each Question carries TEN Marks 5*10=50M

9. Explain Linked represents with array? With an Example?
10. Explain Sparse Matrices?
11. Explain stack operations?
12. What is a Queue? Explain Queue implementation?
13. Explain Tree traversing methods?
14. Explain Binary search tree?
15. Explain about BFS and DFS?
16. Explain about sequential and binary searching?

COMPUTER SCIENCE

CSC-401C

2019-'20

B.Sc.(MPCs., MCCs.)

SEMESTER – IV

PAPER – IV

Max. Marks 75

Guidelines for paper setting '**DATA STRUCTURES**'Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	2	2
Unit-3	2	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 – IV PAPER – IV Max. Marks 50 Pass Marks 25 TotalHrss:30

LAB LIST

DATA STRUCTURES

No. of Hours per week: 2

External: 25

Internal: 25

Credits: 2

1. Write a Program to implement the Linked List operations
2. Write a Program to implement the Stack operations using an array.
3. Write Programs to implement the Queue operations using an array.
4. Write Programs to implement the Stack operations using a singly linked list.
5. Write Programs to implement the Queue operations using a singly linked list.
6. Write a program to search an item in a given list using Linear Search and Binary Search
7. Write a program for Quick Sort
8. Write a program for Merge Sort
9. Write a program for insertion sort
10. Write a program for Bubble Sort.
11. Write a program for selection Sort.
12. Write a program for Graph traversals

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SEMESTER –IV PAPER – IV Max. Marks 75 Pass Marks 30 Total Hrs 60

Syllabus: Business Analytics NO. Of. Hours: 5 Credits: 4

Unit-I: 12Hrs

Introduction - Business Analytics Life Cycle - Business Analytics Process - Data concepts - Data exploration & visualization - Business Analytics as Solution for Business Challenges .

Unit-II: 12Hrs

Automated Data Analysis: Tabulation and Cross Tabulation of Data: Univariate, Bivariate and Multivariate Data Analysis – ANOVA.

Unit-III: 12Hrs

Hypothesis Testing: Type 1 & 2 errors - T-test, ANOVA, Chi-Square and correlation- Linear Regression Analysis - Logistic Regression - Cluster Analysis - Market Basket Analysis.

Unit-IV: 14Hrs

Business Data Management: Master Data Management: Data Warehousing and kinds of Architecture – Data Extraction – Transformation and Up-loading of Data – Data Mining – Meta Data – Data Marts – Creating Data Marts – Data Integration – OLTP and OLAP.

Unit-V: 10Hrs

SPSS Packages – Applications and Case Studies.

Suggested Books:

1. Gupta S.P. “Statistical Methods”, Sultan Chand, New Delhi, 2010.
2. K.V. Rao, “Research Methodology in Commerce and Management”, Sterling Publishers, New Delhi, 2012.
3. T.S. Wilkinson & P.L. Bhandarkar, “Methodology and Techniques of Social Research”, 2010.
4. Richard A.Johnson & Dean W.Wichern, “Applied Multivariate Statistical Analysis”, Prentice Hall International Inc., 2007.
5. R.N Prasad and Seema Acharya, “Fundamentals of Business Analytics”, Wiley India
6. Pang-Ning Tan, Michael Steinbach & Vipin Kumar, “Introduction to Data Mining”, Pearson, 2009.
7. Alex Berson, Stephen Smith & Kurt Thearling, “Building Data Mining Application for CRM”, Tata McGraw Hill, New Delhi, 2000.

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SEMESTER – IV PAPER – IV Max. Marks 75 Pass Marks 30 Total Hrs: 60

Model Paper

Business Analytics

NO Of Hours: 5

Credits: 4

Section- A

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

5*5=25M

1. What is the role of Business Analyst?
2. Write a short note on Pivot table?
3. Explain methods of Tabulation?
4. Write a short note on ANOVA?
5. What is T-Test?
6. Explain Scatter diagram method?
7. Describe Data Warehouse?
8. Write a short note on SPSS?

Section- B

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

5*10=50M

9. Explain Business Analytics life cycle?
10. Define Data? Explain about different types of data?
11. Explain different types of Tabulation?
12. What is Hypothesis Testing? Explain One Tailed and Two Tailed test?
13. What is Regression? Explain Logistic Regression?
14. Explain about Data Marts?
15. Explain Different types of OLAP Architecture?
16. Explain Basic steps in working with SPSS?

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COMPUTER SCIENCE	CCSC-403	2019-'20	B.Com.(C.A.)
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SEMESTER – IV

PAPER – III

Max. Marks 75

Guidelines for paper setting '**BUSINESS ANALYTICS**'

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	2
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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COMPUTER SCIENCE	CSC-601(GE)	2019-'20	B.Sc.(MPCs)
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SEMESTER – VI

PAPER – VII

Max. Marks 75

Syllabus**WEB TECHNOLOGIES**

NO Of Hours: 4

No of Credits: 3

Pass Marks 30

Course Objectives:

1. To provide knowledge on web architecture, web services, client side and server side scripting technologies to focus on the development of web-based information systems and web services.
2. To provide skills to design interactive and dynamic web sites.

Unit -I Introduction to XHTML:**12 Hrs**

Introduction to HTML, Basic html, Document body text, Hyper links, Adding more formatting Lists, Tables, Images, Multimedia Objects, Frames, Forms and XHTML.

Unit- II: CSS:**12 Hrs**

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, Arrays, Functions.

Unit –III: Objects in Java Script & Dynamic HTML with Java Script**12 Hrs**

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, Opening a new window, Messages and Confirmations, The status bar, Writing to a different frame, Rollover buttons, Moving images, Multiple pages in a single download, A text-only menu system, Floating logos.

Unit –IV: XML Defining Data for Web Applications**12 Hrs**

XML: Introduction to XML, Basic XML, document type definition, XML Schema, Document object model, presenting XML, 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 (2007)
2. Head First Servlets and JSP 2nd Edition, Bryan Basham, Kathy Sierra
3. Uttam Kumar Roy, Web Technologies from Oxford University Press

Student Activities:

1. Prepare a web site for your college
2. Prepare your personal website

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SEMESTER – VI**PAPER – VII****Max. Marks 75****Model Paper****WEB TECHNOLOGIES****No Of Hours: 4****No of Credits: 3****Pass Marks 30****Section -A**Answer **FIVE** Questions. Each Question carries **FIVE** Marks.**5 X 5=25M**

1. Write about structure of HTML Document with an example
2. Explain about lists in HTML
3. Write about properties used in Style Sheet
4. Write about arrays in Java Script
5. Describe Data Object
6. Write about Rollover buttons
7. Describe XML Elements
8. Write the syntax of EL and EL variables

Section- BAnswer **FIVE** the Questions. Each Question carries **TEN** Marks**5 X 10=50M**

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

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SEMESTER – VI

PAPER – VII

Max. Marks 75

Pass Marks 30

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	2	2
Unit-3	2	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 – VI	PAPER – VI		Max. Marks 50

Lab List**WEB TECHNOLOGIES****Pass Marks 25****No. of Hours per week: 2****External: 25****Internal: 25****Credits: 2**

1. Write an HTML program to demonstrate text formatting, working with images and hyper links
2. Write an HTML program to create Student Marks sheet preparation.
3. Write an HTML program to explain String manipulation-using functions.
4. Write an HTML program to explain <form> events
5. Write an HTML program to perform all arithmetic operations using java script.
6. Develop a HTML Form, which accepts any Mathematical expression. Write JavaScript code to Evaluates the expression and Displays the result.
7. Create a form for Student information. Write JavaScript code to find Total, Average, Result and Grade.
8. Create a form for Employee information. Write JavaScript code to find DA, HRA, PF, TAX, Gross pay, Deduction and Net pay.
9. Create a form consists of a Multiple choice questions that validates the answer dynamically and displaying result using java script.
10. Write a java script to work with following
 - a. Date display b. Calendar c. Copy Selected Text
 - b. IP Address

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COMPUTER SCIENCE	CSC-602CE	2019-'20	B.Sc.(MPCs)
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SEMESTER – VI**PAPER – VIII****Max. Marks 75**

Model Paper**PHP, MySql & Word Press****NO Of Hours:3****No Of Credits: 3****Pass Marks 30****Section- A**Answer **FIVE** Questions. Each Question carries **FIVE** Marks.**5*5=25M**

1. Define variable and list the standard data types in PHP.
2. What is Break and Continue statements in PHP.
3. Define Function and write a program for Function?
4. Write programs to pass an argument to function by Value and Reference in PHP.
5. Explain how to create a simple form in PHP.
6. What is Cookie and explain how to accessing cookie in PHP.
7. Describe Update Command in MySQL with Example.
8. Write a short notes on Word Press.

Section- BAnswer **FIVE** Questions. Each Question carries **TEN** Marks**5*10=50M**

9. Explain about Operators and Expressions available in PHP with examples.
10. Explain about Loops and switching statements in PHP with examples.
11. Explain about Arrays and related functions to arrays in PHP with examples.
12. Explain the following Strings functions with examples
a. strlen() b. strstr() c. strpos() d. substr() e. strtok()
13. Explain how to send Mail on form submission in PHP.
14. Explain how to work with Sessions in PHP.
15. Explain how to insert & retrieve data with MySql in PHP.
16. Explain how to work with Themes and also featured images in Word Press.

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SEMESTER – VI

PAPER – VIII

Max. Marks 75

Pass Marks 30

Guidelines for paper setting ‘ **PHP, MySql & Word Press** ’

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (Essay questions)
Unit-1	2	2
Unit-2	2	2
Unit-3	2	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 – VI

PAPER – VIII

Max. Marks 50

Lab List

PHP, MySQL & Word Press Lab PROJECT

Pass Marks 25

No. of Hours per week: 3**External: 25****Internal: 25****Credits: 2**

MySQL Lab Cycle

Cycle -1

An Enterprise wishes to maintain the details about his suppliers and other corresponding details. For that he uses the following details.

Suppliers (sid: Integer, sname: string, address: string)

Parts (pid: Integer, pname: string, color: string)

Catalog (sid: integer, pid: integer, cost: real)

The catalog relation lists the prices charged for parts by suppliers.

Write the following queries in SQL:

1. Find the pnames of parts for which there is some supplier.
2. Find the snames of suppliers who supply every part.
3. Find the snames of supplier who supply every red part.
4. Find the pnames of parts supplied by London Supplier and by no one else.
5. Find the sid's of suppliers who charge more for some part than the average cost of that part.
6. For each part, find the sname of the supplier who charges the most for that part.
7. Find the sid's of suppliers who supply only red parts.
8. Find the sid's of suppliers who supply a red and a green part.
9. Find the sid's of suppliers who supply a red or green part.
10. Find the total amount has to pay for that supplier by part located from London.

Cycle – 2

An organisation wishes to maintain the status about the working hours made by his employees. For that he uses the following tables.

Emp (eid: integer, ename: string, age: integer, salary: real)

Works (eid: integer, did: integer, pct_time: integer)

Dept (did: integer, budget: real, managerid: integer)

An employee can work in more than one department; the pct_time field of the works relation shows the percentage of time that a given employee works in a given department.

Resolve the following queries.

1. Print the names and ages of each employee who works in both Hardware and Software departments.
2. For each department with more than 20 full time equivalent employees (i.e., where the part-time and full-time employees add up to at least that many full-time employees), print the did's together with the number of employees that work in that department.
3. Print the name of each employee whose salary exceeds the budget of all of the departments that he or she work in.
4. Find the managerid's of managers who manage only departments with budgets greater than 1,000,000.
5. Find the enames of managers who manage the departments with largest budget.
6. If a manager manages more than one department, he or she controls the sum of

all the budgets for those departments. Find the managerid's of managers who control more than 5,000,000.

7. Find the managerid's of managers who control the highest amount.
8. Find the average manager salary.

PHP Lab Cycle

1. Write a PHP program to Display "Hello"
2. Write a PHP Program to display the today's date.
3. Write a PHP Program to read the employee details.
4. Write a PHP Program to display the
5. Write a PHP program to prepare the student marks list.
6. Write a PHP program to generate the multiplication of two matrices.
7. Write a PHP Application to perform demonstrate the college website.
8. Write a PHP application to add new Rows in a Table.
9. Write a PHP application to modify the Rows in a Table.
10. Write a PHP application to delete the Rows from a Table.
11. Write a PHP application to fetch the Rows in a Table.
12. Develop an PHP application to make following Operations
 - i. Registration of Users.
 - ii. Insert the details of the Users.
 - iii. Modify the Details.
 - iv. Transaction Maintenance.
 - a) No of times Logged in
 - b) Time Spent on each login.
 - c) Restrict the user for three trials only.
 - d) Delete the user if he spent more than 100 Hrs of transaction.

Wordpress Lab

1. Installation and configuration of word press.
2. Create a site and add a theme to it.

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SEMESTER – VI

PAPER – VIII

Max. Marks 75

Syllabus

Advanced java Script: JQUERY/AJAX/JSON/ANGULAR JS

NO Of Hours:4**Credits: 3****Pass Marks 30**

Course Objective: To impart knowledge in designing a webpage in a structured way by using advanced java script ie., using different scripting languages

UNIT-1: JQuery – Basics:**10 Hrs**

String, Numbers, Boolean, Objects, Arrays, Functions, Arguments, Scope, Built-in Functions. jQuerySelectors: CSS Element Selector, CSS Element ID Selector, CSS Element Class Selector, CSS Universal Selector, Multiple Elements E, F, G Selector, Callback Functions. jQuery – DOM Attributes: Get Attribute Value, Set Attribute Value. jQuery – DOM Traversing : Find Elements by index, Filtering out Elements, Locating Descendent Elements, JQuery DOM Traversing Methods.

Unit – II: JQuery – CSS Methods :**10 Hrs**

Apply CSS Properties, Apply Multiple CSS Properties, Setting Element Width & Height, JQuery CSS Methods. jQuery – DOM Manipulation Methods: Content Manipulation, DOM Element Replacement, Removing DOM Elements, Inserting DOM elements, DOM Manipulation Methods. jQuery – Events Handling: Binding event handlers, Removing event handlers, Event Types, The Event Object, The Event Attributes. jQuery – Effects: JQuery Effect Methods, jQuery Hide and Show, jQuery Toggle, jQuery Slide – slideDown, slideUp, slideToggle, jQuery Fade – fadeIn, fadeOut, fadeTo, jQuery Custom Animations

Unit – III: Intro to jQuery UI**15 Hrs**

, Need of jQuery UI in real web sites, Downloading jQuery UI, Importing jQuery UI, Draggable, Droppable, Resizable, Selectable, Sortable, Accordion, Auto Complete, Button Set, Date Picker, Dialog, Menu, Progress Bar, Slider, Spinner, Tabs, Tooltip, Color Animation, Easing Effects, addClass, removeClass, Effects, jQuery UI themes, Customizing jQuery UI widgets / plug-ins, jQuery UI with CDN, Consuming jQuery Plug-ins from 3rd party web sites jQuery Validations, Intro to jQuery validation plug-in, Using jQuery validation plug-in, Regular expressions.

Unit – IV: Intro to AJAX**15 Hrs**

Need of AJAX in real web sites, Getting database data using jQueryAJAX, Inserting, Updating, Deleting database data using jQuery-AJAX Grid Development using jQuery-AJAX Intro to JSON JSON syntax, Need of JSON in real web sites, JSON object, JSON array, Complex JSON objects, Reading JSON objects using jQuery.

Unit – V: Intro to AngularJS**15 Hrs**

Need of AngularJS in real web sites, Downloading AngularJS, AngularJS first example, AngularJS built-in directives, AngularJS expressions, AngularJS modules, AngularJS controllers, AngularJS scope AngularJS dependency injection AngularJS, bootstrapping AngularJS data bindings, AngularJS \$watch, AngularJS filters, AngularJS events, AngularJS AJAX, Ng-repeat, AngularJS with json arrays, AngularJS registration form and login form, AngularJS CRUD operations, AngularJS Animations, AngularJS validations, AngularJS \$q, AngularJS custom values, AngularJS custom factories, AngularJS custom services, AngularJS custom directives, AngularJS custom providers, AngularJS Routing, AngularUI Routing.

References:

1. jQuery UI 1.8: The User Interface Library for jQuery by Dan Wellman
2. jQuery Fundamentals by Rebecca Murphey 3. Ajax: The Complete Reference by Thomas A. Powell

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SEMESTER – VI**PAPER – VIII****Max. Marks 75****Model Paper****Advanced java Script: JQUERY/AJAX/JSON/ANGULAR JS****NO Of Hours:3****No Of Credits: 3****Pass Marks 30****Section- A**

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

5*5=25M

1. What is jquery? Write a simple program to display welcome message.
2. Write a jquery-dom attributes.
3. How we can apply css properties in j query?
4. Write a program for jquery fade In, fade Out.
5. Discuss in detail about jquery UI categorization.
6. Write a need of AJAX in real websites.
7. What is JSON? Write a syntax & need of JSON in real websites.
8. Write a short notes angularJS built-in directives.

Section- B

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

5*10=50M

9. Explain in detail about DOM traversing methods.
10. Explain detail about jquery-dom manipulation methods.
11. Explain detail about jquery event handling methods.
12. Write a program for draggable , resizable using jquery UI.
13. How can we manipulate the data in a database using jquery-AJAX.
14. What is JSON object ? Discuss in detail about complex JSON objects.
15. What is angular JS ? Need of angular JS in real websites & write any example program.
16. Write a program for registration form and login form using Angular JS.

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SEMESTER – VI

PAPER – VIII

Max. Marks 75

Pass Marks 30

Guidelines for paper setting – **‘Advanced java Script: JQUERY/AJAX/JSON/ANGULAR JS’**

?

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (Essay questions)
Unit-1	2	1
Unit-2	2	2
Unit-3	1	1
Unit-4	2	2
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 – VI

PAPER – VIII

Max. Marks 50

Lab List Advanced java Script: JQUERY/AJAX/JSON/ANGULAR JS

Pass Marks 25

No. of Hours per week: 3

External: 25

Internal: 25

Credits: 2

1. Using jQuery find all textareas, and makes a border. Then adds all paragraphs to the jQuery object to set their borders red.
2. Using jQuery add the class "w3r_font_color" and w3r_background to the last paragraph element.
3. Using jQuery add a new class to an element that already has a class.
4. Using jQuery insert some HTML after all paragraphs.
5. Using jQuery insert a DOM element after all paragraphs.
6. Convert three headers and content panels into an accordion. Initialize the accordion
And specify the animate option
7. Convert three headers and content panels into an accordion. Initialize the accordion and specify the height.
8. Create a pre-populated list of values and delay in milliseconds between a keystroke occurs and a search is performed.
9. Initialize the button and specify the disable option.
10. Initialize the button and specify an icon on the button.
11. Initialize the button and do not show the label.
12. Create a simple jQuery UI Datepicker. Now pick a date and store it in a textbox.
13. Initialize the date picker and specify a text to display for the week of the year column heading.

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SEMESTER – VI

PROJECT (PHP & MYSQL)

Max. Marks 100

OBJECTIVE

The objective of the Project Course is to help the students to study, analyze and design software or utility for different problems or applications. This will improve the skills of software development of the students.

MARKS FOR PROJECT EVALUATION

The project course will be evaluated for **100** Marks, of which **75** marks are meant for the practical evaluation of a project and **25** marks are allotted for attending viva-voce examination. The passing minimum in the project work will be 50% of the total mark. i.e. the student should get minimum 50% marks in the project evaluation and the viva-voce examination. Thus, the minimum mark the student is required to obtain is 50 out of 100 marks.

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COMPUTER SCIENCE	CCSC-507C	2019-'20	B.Sc.(MPCs)
SEMESTER – VI	PAPER – VIII	Max. Marks 75	Pass Marks 30

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

Unit wise weightage of Marks

	Section-A	Section-B
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	(Short answer questions)	(essay questions)
Unit-1	2	2
Unit-2	2	2
Unit-3	1	2
Unit-4	2	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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COMPUTER SCIENCE	COM-CSC-605	2019-20	B.Com (C.A)
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SEMESTER –VI

PAPER – IX

Total: 60 Hrs

Syllabus

TALLY

Credits 3

NO Of Hours 5

Pass Marks 30

Unit-I: Introduction to Tally:

12Hrs

Introduction, Software versions of Tally, Terminology related to Accounts credit & Debit, Journal, Ledger, Voucher, Group etc. Difference between Manual Accounting and Accounting Packages. Features and advantages of Tally.

Unit-II: Introduction of Tally Software **12Hrs**

Introduction of Tally Software Creation of a company, Gateway of Tally, Accounts Information, Groups, pre defined Groups, Creation of New Groups, Creation of sub Group.

Unit-III: Ledgers **12Hrs**

Ledger Creation Single and multiple Ledgers, Displaying & altering Ledgers, configure Ledger, Stock Ledger, Ledgers and their Group Allocation.

Unit-IV: Vouchers **12Hrs**

Types of vouchers – recording of vouchers – entry of payment voucher, Receipt voucher, sales voucher, purchase voucher, Journal Voucher, Contra Voucher, Debit & Credit Note. Creating New Voucher types, customizing the Existing voucher types, Alternation of Voucher, Deletion of Voucher.

Unit-V: Final Accounts **12Hrs**

Customizing the final accounts – Profit and Loss Account, Balance Sheet. Key board shortcuts in Tally. Generating the Reports from Tally, Trial Balance, Account Books, Sales, Purchase, Journal Registers, Statement of Accounts, Day Book, List of Accounts.

Reference Books:

1. K. Kiran Kumar, Tally ERP9.
2. Tally 9 In Simple Steps, Kogent solutions Inc., John Wiley & Sons, 2008.
3. Narmata Agarwal, Financial Accounting on Computers Using Tally, Dreamtech Press, 2000.
4. Tally 9.0, Google eBook, Computer World.
5. Vikas Gupta, Comdex Computer and Financial Accounting with Tally 9.0, 2007.
6. Tally ERP 9 Made Simple Basic Financial Accounting, BPB Publisher.
7. Avichi Krishnan, Tally ERP 9 for Real Time Accounting, Book Ganga.

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SEMESTER –VI		PAPER – IX	Total: 60 Hrs

Model Paper

TALLY

Credits 3

NO Of Hours 5

Pass Marks 30

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

5x5=25M

1. Differentiate between Manual Accounting and Accounting Packages?
2. What are the features of Tally?
3. How to maintain account information? Explain
4. How to create a new group in Tally
5. Explain how to create a stock ledger?
6. How to display and alter a ledger?
7. Explain contra Voucher
8. Write a short note on Day Book

Section- B

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

5 X 10=50M

9. Explain evolution of Tally and what are the features and advantages of Tally
10. Explain versions of Tally software
11. Explain about Gateway of Tally
12. Explain about Group and predefined Groups
13. Explain ledger creation
14. How to create a single and multiple ledgers
15. Explain different types of vouchers?
16. Explain how to generate the reports from Tally?

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SEMESTER –VI	PAPER – IX	Max. Marks 75	Pass Marks 30

Guidelines for paper setting '**TALLY**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	2	2
Unit-3	2	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 – VI**PAPER – V****Max. Marks:50**
Pass Mark: 25**TALLY****No. Of Hours per week: 3****External: 25 Internal: 25****Credits: 2****Lab list**

1. Architecture and customization of Tally
2. Configuration of Tally
3. Tally Screens and Menus
4. Creation of new company and groups.
5. Preparation of voucher entries.
 - a. Payment voucher creation
 - b. Receipt voucher creation
 - c. Sales voucher creation
 - d. Purchase voucher creation
 - e. Contra voucher creation
 - f. Journal voucher creation
6. Ledger Creation.
7. Preparation of VAT
8. Preparation of TDS
7. Preparation of Trail balance
8. Preparation of Profit and loss statement.
9. Preparation of Balance Sheet
10. Preparation of Bank Reconciliation Statement.
11. Example Exercise

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COMPUTER SCIENCE	COM-CSC-606	2019-20	B.Com (C.A)
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SEMESTER –VI

PAPER – X

Total: 60 Hrs

Syllabus

E-COMMERCE

Credits 3

NO Of Hours 5

Pass Marks 30

Unit-I: Introduction to E-Commerce

Scope, Definition, e-Commerce and the Trade Cycle, Electronic Markets, Electronic Data Interchange, Internet Commerce. Business Strategy in an Electronic Age: Supply Chains, Porter's Value Chain Model, Inter Organizational Value Chains, Competitive Strategy, First Mover Advantage – Sustainable Competitive Advantage, Competitive Advantage using E-Commerce – Business Strategy.

Unit-II: Business-to-Business Electronic Commerce

Characteristics of B2B EC, Models of B2B EC, Procurement Management by using the Buyer's Internal Market place, Just in Time Delivery, Other B2B Models, Auctions and Services from traditional to Internet Based EDI, Integration with Back-end Information System, Role of Software Agents for B2B EC, Electronic marketing in B2B, Solutions of B2B EC, Managerial Issues, Electronic Data Interchange (EDI), EDI: Nuts and Bolts EDI and Business.

Unit-III: Internet and Extranet

Automotive Network Exchange, Largest Extranet, Architecture of the Internet, Intranet and Extranet, Intranet software, Applications of Intranets, intranet Application Case Studies, Considerations in Intranet Deployment, Extranets, Structures of Extranets, Extranet products and services, Applications of Extranets, Business Models of Extranet Applications, Managerial Issues. Electronic Payment Systems: Issues and Challenges .

Unit-IV: Public Policy:

From Legal Issues to Privacy : Legal Incidents, Ethical and Other public Policy Issues, Protecting Privacy, Protecting Intellectual Property, Free speech, Internet Indecency and Censorship, Taxation and Encryption Policies, Other Legal Issues: Contracts, Gambling and More, Consumer and Seller Protection in EC.

Unit-V: Infrastructure For EC

Network of Networks, Internet Protocols, Web- Based client/Server, Internet Security, Selling on the Web, Chatting on the Web, Multimedia delivery, Analyzing Web Visits, Managerial Issues, Equipment required for establishing EC Sites – problems in Operation – Future of EC.

Reference Books

1. David Whiteley, "E-Commerce", Tata McGraw Hill, 2000.
2. E Business by Parag Kulakarni and Sunitha Jahirabdkar from Oxford University Press.
3. E Business by Jonathan Reynolds from Oxford University Press.
4. Eframi Turban, Jae Lee, David King, K. Michael Chung, "Electronic Commerce",
5. Pearson Education, 2000.

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SEMESTER –VI

PAPER – X

Total: 60 Hrs

Syllabus

E-COMMERCE

Credits 3

NO Of Hours5

Pass Marks 30

Section-AAnswer **FIVE** Questions. Each Question carries **FIVE** Marks.**5*5=25M**

1. Explain Electronic data interchange?
2. Write about Value Chain Model
3. What are the characteristics of B2B Electronic Commerce
4. What is the role of software agents for B2B Electronic Commerce?
5. Write about applications of Intranet?
6. Explain the structure of Extranet?
7. Explain encryption policies?
8. Write about Internet protocols?

Section-BAnswer **FIVE** Questions. Each Question carries **TEN** Marks.**5*10=50M**

9. What are the advantages and limitations of E-commerce?
10. Write Business Strategy in an Electronic age
11. Explain Electronic Data Interchange(EDI)
12. Explain different Models of B2B Electronic Commerce?
13. Explain the Architecture of Internet?
14. Explain Business Models of Extranet Applications?
15. Explain Ethical and Other public Policy Issues?
16. Explain about the future of EC

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<u>SEMESTER –VI</u>	PAPER – X	Max. Marks 75	Pass Marks 30

Guidelines for paper setting '**E-COMMERCE**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	2	2
Unit-3	2	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 weight age given by us

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SEMESTER –VI

PAPER – XI

Syllabus

PHP & MY SQL

Credits 5

Unit-I: Building blocks of PHP:

Variables, Data Types, Operators and Expressions, Constants. Flow Control Functions in PHP: Switching Flow, Loops, Code Blocks and Browser Output. Working with Functions: Defining Functions, Calling functions, returning the values from UserDefined Functions, Variable Scope, Saving State between Function calls with the Static statement, more about arguments.

Unit-II: Working with Arrays:

Arrays, Creating Arrays, Some Array-Related Functions. Working with Objects: Creating Objects, Object Instance. Working with Strings, Dates and Time: Formatting Strings with PHP, Investigating Strings with PHP, Manipulating Strings with PHP, Using Date and Time Functions in PHP.

Unit-III: Working with Forms:

Creating Forms, Accessing Form – Input with User defined Arrays, Combining HTML and PHP code on a single Page, Using Hidden Fields to save state, Redirecting the user, Sending Mail on Form Submission, Working with File Uploads. Working with Cookies and User Sessions: Introducing Cookies, Setting a Cookie with PHP, Session Function Overview, Starting a Session, Working with session variables, passing session Ids in the Query String, Destroying Sessions and Unsetting Variables, Using Sessions in an Environment with Registered Users.

Unit-IV: Working with Files and Directories:

Including Files with include(), Validating Files, Creating and Deleting Files, Opening a File for Writing, Reading or Appending, Reading from Files, Writing or Appending to a File, Working with Directories, Open Pipes to and from Process Using popen (), Running Commands with exec(), Running Commands with system () or passthru (). Working with Images: Understanding the Image-Creation Process, Necessary Modifications to PHP, Drawing a New Image, Getting Fancy with Pie Charts, Modifying Existing Images, Image Creation from User Input.

Unit-V: Interacting with MySQL using PHP:

MySQL Versus MySQLi Functions, Connecting to MySQL with PHP, Working with MySQL Data. Creating an Online Address Book: Planning and Creating Database Tables, Creating Menu, Creating Record Addition Mechanism, Viewing Records, Creating the Record Deletion Mechanism, Adding Sub-entities to a Record.

References:

1. Julie C. Meloni, PHP MySQL and Apache, SAMS Teach Yourself, Pearson Education (2007).
2. Xue Bai Michael Ekedahl, The Web Warrior Guide to Web Programming, Thomson (2006).

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SEMESTER –VI

PAPER – XI

Total: 60 Hrs

Syllabus

PHP & MYSQL

Credits 5

NO Of Hours 5

Pass Marks 30

Section-A

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

5*5=25M

1. Explain about different data types available in PHP?
2. Define function? Explain how to call the function?
3. Write a short note on Creating Objects
4. Explain about date and time functions?
5. Write about Session Function?
6. Explain about cookies?
7. Explain about Reading from files?
8. Describe how to create the Record Addition Mechanism?

Section-B

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

5*10=50M

9. Explain different types of Operators in PHP?
10. Explain flow control functions in PHP?
11. What is an Array? Explain about array related functions.
12. Explain different string functions in PHP?
13. Explain about how to create and access a form in PHP?
14. Describe the working with session variables?
15. Explain working with Directories?
16. Explain about how to insert and retrieve the data in PHP?

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 2017-2018)

COMPUTER SCIENCE	COM-CSC-607	2019-20	B.Com (C.A)
<u>SEMESTER –VI</u>	PAPER – XI	Max. Marks 75	Pass Marks 30

Guidelines for paper setting '**PHP & MYSQL**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
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Unit-1	2	2
Unit-2	2	2
Unit-3	2	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 weight age given by us

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COMPUTER SCIENCE	CCSC-607	2019-20	B.Com (C.A)
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SEMESTER –VI**PAPER – VI****Total: 60 Hrs****Lab List PHP, MySQL****No. of Hours per week: 2****External: 25****Internal: 25****Pass Marks 25****Credits: 2**

MySQL Lab Cycle

Cycle -1

An Enterprise wishes to maintain the details about his suppliers and other corresponding details. For that he uses the following details.

Suppliers (sid: Integer, sname: string, address: string)

Parts (pid: Integer, pname: string, color: string)

Catalog (sid: integer, pid: integer, cost: real)

The catalog relation lists the prices charged for parts by suppliers.

Write the following queries in SQL:

1. Find the pnames of parts for which there is some supplier.
2. Find the snames of suppliers who supply every part.
3. Find the snames of supplier who supply every red part.
4. Find the pnames of parts supplied by London Supplier and by no one else.
5. Find the sid's of suppliers who charge more for some part than the average cost of that part.
6. For each part, find the sname of the supplier who charges the most for that part.
7. Find the sid's of suppliers who supply only red parts.
8. Find the sid's of suppliers who supply a red and a green part.
9. Find the sid's of suppliers who supply a red or green part.
10. Find the total amount has to pay for that supplier by part located from London.

Cycle – 2

An organisation wishes to maintain the status about the working hours made by his employees. For that he uses the following tables.

Emp (eid: integer, ename: string, age: integer, salary: real)

Works (eid: integer, did: integer, pct_time: integer)

Dept (did: integer, budget: real, managerid: integer)

An employee can work in more than one department; the pct_time field of the works relation shows the percentage of time that a given employee works in a given department.

Resolve the following queries.

1. Print the names and ages of each employee who works in both Hardware and Software departments.
2. For each department with more than 20 full time equivalent employees (i.e., where the part-time and full-time employees add up to at least that many full-time employees), print the did's together with the number of employees that work in that department.
3. Print the name of each employee whose salary exceeds the budget of all of the departments that he or she work in.
4. Find the managerid's of managers who manage only departments with budgets greater than 1,000,000.
5. Find the enames of managers who manage the departments with largest budget.
6. If a manager manages more than one department, he or she controls the sum of all the budgets for those departments. Find the managerid's of managers who control more than 5,000,000.
7. Find the managerid's of managers who control the highest amount.
8. Find the average manager salary.

PHP Lab Cycle

1. Write a PHP program to Display “Hello”
2. Write a PHP Program to display the today’s date.
3. Write a PHP Program to read the employee details.
4. Write a PHP Program to display the
5. Write a PHP program to prepare the student marks list.
6. Write a PHP program to generate the multiplication of two matrices.
7. Write a PHP Application to perform demonstrate the college website.
8. Write a PHP application to add new Rows in a Table.
9. Write a PHP application to modify the Rows in a Table.
10. Write a PHP application to delete the Rows from a Table.
11. Write a PHP application to fetch the Rows in a Table.
12. Develop an PHP application to make following Operations
 - i. Registration of Users.
 - ii. Insert the details of the Users.
 - iii. Modify the Details.
 - iv. Transaction Maintenance.
 - a) No of times Logged in
 - b) Time Spent on each login.
 - c) Restrict the user for three trials only.
 - d) Delete the user if he spent more than 100 Hrs of transaction.

→Discussed and recommended the 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 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:

There are two components in the Valuation and Assessment of a student – Internal Assessment (**IA**) Semester Examinations (**SE**). **For the Batch of Students Admitted from 2018-19.**

Internal Assessment (IA)

- The maximum mark for IA is 30 and SE is 70 for theory; and for practical papers 50.
- 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.
- 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.
- The semester examination will be of 3 hours with maximum 70 marks.
- There is no passing minimum marks 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 & Foundation course 2 hours irrespective of the number of credits allotted to it.
- 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.
- 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 maximum marks for each Paper shall be 100.

Evaluation of a student is done by the following procedure for All II & III Year B.Sc. (MPCs) & B.Com. (C.A). For the Batch of Students Admitted from 2016-17.

Internal Assessment Examinations:

- i) Out of maximum 100 marks in each paper, 25 marks shall be allocated for internal assessment.
- ii) Out of these 25 marks, 20 marks are allocated for announced internal tests. Two announced internal tests will be conducted and average of these two tests shall be deemed as the marks obtained by the student, remaining 5 marks are allocated on the basis of candidate's percentage of attendance.

Semester-End Examinations:

- i) The maximum marks for Semester-End examinations shall be 75 marks and duration of the examination shall be 3 Hours.
- ii) Semester-End examinations shall be conducted in theory papers and the practical papers are conducted at the end of every Semester for II & III B.Sc. (MPCs) only.
- iii) 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.
- iv) V semester end C practical examination are to be evaluated by Internal Examiners and Even semester **Tally** Practical examinations are to be evaluated by External Examiner for III B.Com (Computers) students only.

Question paper guide lines for Practical Examinations at the end of Semesters III & IV
Two Practical Programs to be conducted out of 15 programs at the end of Semester III & IV
Practical Examination time 3Hrs and Maximum Marks 50
Scheme of valuation Semesters – II & IV B.Sc. (M.P.Cs), B.Com (Computers)

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

1. Discussed and recommended for organizing Seminars, Guest lectures, Work-shops to upgrade the knowledge of students, for the approval of the Academic Council. Discussed and recommended to conduct certificate courses for Computer Science and Non-Computer Science students separately like TALLY ACCOUNTING PACKAGE, ADOBE PHOTOSHOP, DESKTOP PUBLISHING, COMPUTER HARDWARE AND NETWORKING, WEB DESIGNING, OPERATING SYSTEMS, ETC...
2. Discussed and empowered the HOD to suggest the panel of the paper setters and examiners to the controller of the examinations.
3. Nil.

Chairman

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

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

Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF ECONOMICS

MINUTES OF BOARD OF STUDIES

EVEN SEMESTER

15-10-2019

Minutes of the meeting of the Board of Studies in Economics of AG & SG Siddhartha Degree College of Arts & Science, Vuyuru, held at 10.30 A.M on 15-10-2019 in the Department of Economics.

Sri. G.S.S. SINGH. HOD,Economics has presided over the BOS meeting

Members Present:

- 1) G.S.S. Singh Chairman Head, Department of Economics
(Sri.G.S.S. SINGH) AG & SG S Degree College of Arts & Science
Vuyuru-521165
- 2) N. Rama Rao member Lecturer, Department of Economics
(Sri. N. Rama Rao) AG & SG S Degree College of Arts & Science
Vuyuru-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) Ch. Srinivasa Rao Academic Council Department of Economics,
(Dr.Ch.Srinivasa Rao) Nominee SARM Degree College,Alagadda,
Karnool District,518543.
- 6) K.V. Manujna Industrialist ManagerSyndicate Bank
(Mis/Mrs.K.V.Manujna) Vuyuru.
- 7) V. Vijaya Lakshmi A Student from the Alumini. Thotla
Valluru.(Mis.V.Vijaya Lakshmi)

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AGENDA

1. To review and recommend any changes in the syllabi, model Question paper and guidelines in the 1st, B.A and B.Com, 2nd, 4th and 6th semesters of B.A and B.Com Classes.
2. To discuss and recommend the pattern of Internal Assessment to be followed from the Academic year 2019 – 20.
3. To recommend the guidelines to be followed by the Question Paper Setters in Economics for the 2nd, 4th and 6th semester-end exams;
4. To recommend the teaching and the evaluation methods to be followed under the Autonomous System.
5. To continue the student from the Alumini and Industrialist from the Industrial Sector as the members in the B.O.S. Meeting.
6. to propose the panel of Question paper setters and Examiners ..
7. Any other Matter.

RESOLUTIONS :

3

1) it is Resolved to continue the same syllabi under CBC System approved by the Academic Council of 2018 – 2019 for 1st Degree B.A & B.COM Economics papers, 2nd, 4th and 6th Semesters. PROJECT WORK in VI SEM

2) out of maximum 100 marks in each paper 30 marks shall be allocated for Internal assessments regarding 2nd and 4th Semesters.

A) To implement 30 marks for Internal assessment and 70 marks for External Assessment from the Academic year 2019 – 2020 regarding 2nd and 4th Semesters.

1) out of these 30 marks, 20 marks are allocated for internal tests, 5 marks are allocated for assignment for 2nd and 4th 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.

B) To continue out of maximum 100 marks in each paper 25 marks shall be allocated for Internal Assessments and 75 marks shall be allocated for External Assessment from the Academic year 2019 – 2020 regarding 6th Semester.

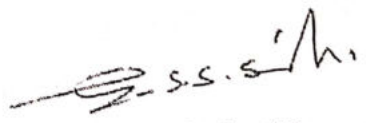
1. out of these 25 marks, 15 marks are allocated for internal tests, 5 marks are allocated for assignment for VI Semester. The two tests will be conducted and average of these two tests shall be deemed as the marks obtained by a student, and remaining 5 marks are allotted for Attendance.

3. Discussed and recommended the syllabi, Model question papers under CBC system and Guidelines to be followed by the question paper setters of 2nd semester of 1 B.A & 1 B.COM Economics papers and 4th & 6th semesters of B.A Classes for the Academic year 2019 – 2020.

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) It is resolved to continue a student from the Alumini and Industrialist under the Guidelines of UGC.

6. 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.


Chairman

(AUTONOMOUS) VUYYURU (2019 – 2020)

B. A. ECONOMICS

1 Year B. A. Programme (UG) Courses – Under CBCS

Semester – II

Paper – II (Core Paper)

Micro Economics - Production and Price Theory

Module - 1

Production function-Concept of homogeneous production function-Cobb- Douglas Productionfunction- Law of variable proportions-Law of Returns to Scale - Different Concepts of Costs –Explicit & Implicit, Opportunity, Total – fixed and Variable Costs, Marginal & Average Costs& its Relationship. Concept of Revenue – Total, Marginal & Average Revenue and Break –Even Point

Module - 2

Analyse different types of Market structures - Perfect Competition - Price determination and equilibrium of firm and industry under perfect competition - Monopoly - Price determination -Price discrimination.

Module - 3

Monopolistic competition - price determination - Oligopoly - Kinked demand curve approach.

Module - 4

Marginal Productivity theory of distribution - Theories of wage determination Subsistence theoryof wages, Standard of living theory of wages, Modern theory of wages Wages and collectivebargaining - concept of minimum wage.

Module - 5

Theory of Rent: Ricardian theory of rent - Quasi rent concept of Alfred Marshall. Theories of Interest - Classical, Neo-classical and Keynes Liquidity Preference theory - Profit - dynamic, innovations, Risk and Uncertainty theories.

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

(AUTONOMOUS) VUYYURU (2019 – 2020)

General

DSC 3 B - Business Economics-II .I.B.Com (General)

Unit-I: Production and Costs: Techniques of Maximization of output, Minimization of costs and Maximization of profit - Scale of production - Economies and Dis-economies of Scale - Costs of Production – Cobb-Douglas Production Function.

Unit-II: Market Structure-I: Concept of Market - Market structure - Characteristics - Perfect competition - characteristics equilibrium price - profit maximizing output in the short and long run Monopoly- characteristics - Profit maximizing out-put in the short and long run - Defects of Monopoly – Distinction between Perfect competition and Monopoly.

Unit-III Market Structure-II: Monopolistic Competition - Characteristics - Product differentiation - Profit maximization - Price and output in the short and long - run – Oligopoly - characteristics - Price rigidity - Kinked Demand Curve - Distribution - Concepts - Marginal Productivity - Theory of Distribution.

Unit-IV National Income And Economic Systems: National Income - Definition Measurement - GDP - Meaning Fiscal deficit - Economic systems - Socialism - Mixed Economic System - Free Market economy.

Unit-V Structural Reforms: Concepts of Economic liberalization, Privatization, Globalization -WTO .Objectives Agreements - Functions - Trade cycles - Meaning - Phases - Benefits of International Trade - Balance of Trade and Balance of payments.

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**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), (2019-2020) VUYYURU**

First B.Com Computers Syllabus Semester II Paper – II
BUSINESS ECONOMICS – Semester –II

Weekly 5 Hours, Credits - 4

PAPER CODE : ECO-203C ✓

Computers

Unit-I-

Introduction: Meaning and Definitions of Business Economics - Nature and scope of Business Economics- Micro and Macro Economics and their Interface.

Unit-II-

Demand Analysis: Definition - Determinants of Demand -- Demand function – Law of demand- Demand Curve - Exceptions to Law of Demand - Elasticity of Demand – Types of Elasticity of Demand – Measurements of Price elasticity of Demand :

Unit – III:

Cost and Revenue Analysis Classification of Costs – Total - Average – Marginal; Cost function – Long-run – Short-run – Total Revenue - Average revenue,– Marginal Revenue - Production and Costs: Techniques of Maximization of output, Minimization of costs and Maximization of profit

Unit-IV:

Market Structure: Concept of Market - Market structure - Perfect competition - characteristics - equilibrium price - Monopoly- characteristics - Defects of Monopoly – Distinction between Perfect competition and Monopoly - Monopolistic Competition - Characteristics - Product differentiation - Oligopoly - characteristics - Price rigidity

Unit-V:

National Income And Economic Systems: National Income - Measurement - GDP - Growth Rates - Problems in Assessment - Economic Systems - Socialism - Mixed Economic System - FreeMarketEconomy .

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

(AUTONOMOUS) VUYYURU (2019 – 2020)

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B. A. ECONOMICS

II Year B. A. Programme (UG) Courses – Under CBCS

Semester – IV

Paper – IV (Core Paper)

Banking and International Trade

Module - 1

Trade Cycles - meaning and definition - Phases of a Trade Cycle - Inflation - definition - types of inflation - causes and effects of inflation measures to control inflation.

Module - 2

Banking: Meaning and definition - Functions of Commercial Banks - Concept of Credit creation - Functions of RBI - Recent developments in banking sectors.

Module – 3

Non-Bank Financial Institutions – Types of NBFIs - Factors contributing to the Growth of NBFIs – Money market – Defects of Indian money market

Module – 4

Concepts of Shares-Debentures - Stock Market - Functions - Primary and Secondary Markets - SEBI - Insurance - Life Insurance and General Insurance.

Module - 5

Macro Economic Policy - Fiscal, Monetary and Exchange rate policies
Objectives and Significance - Importance of International Trade - Regional and International Trade – Defining Balance of Trade and Balance of Payment.

B. A. ECONOMICS

III Year B. A. Programme (UG) Courses – Under CBCS

Semester – VI

Paper – VII-(A) (Elective Paper VII-(A))

AGRICULTURAL ECONOMICS

Module-1

Nature and Scope of Agricultural Economics. Factors affecting agricultural development: technological, institutional and general. Interdependence between agriculture and industry.

Module-2

Concept of production function : input-output and product relationship in farm production.

Module-3

Growth and productivity trends in Indian agriculture with special reference to Andhra Pradesh. Agrarian reforms and their role in economic development.

Module-4

Systems of farming, farm size and productivity relationship in Indian agriculture with special reference to Andhra Pradesh- New agriculture strategy and Green revolution : and its Impact

Module-5

Emerging trends in production, processing, marketing and exports; policy controls and regulations relating to industrial sector with specific reference to agro-industries in agribusiness enterprises.

B. A. ECONOMICS

III Year B. A. Programme (UG) Courses – Under CBCS

Semester – VI

Paper VIII-A; Cluster Elective–A: Agribusiness

Paper VIII-A-1: Agribusiness Environment in Andhra Pradesh

Module-1

Role of agriculture in development process in Andhra Pradesh vis-à-vis other developed states. Economy wide effects of agriculture in Andhra Pradesh through trickle down effects. Backward and forward linkages of agriculture with rest of economy.

Module-2

Agricultural finance-importance in modern agriculture- performance of agricultural finance in Andhra Pradesh -problems of agricultural finance – Inter linkages of agricultural credit and other input markets and product markets.

Module-3

Dynamics of agriculture-crop (horticulture, field crops), sector-livestock (poultry dairy and fisheries) sector and inter linkages among the sectors. Agribusiness sector in Andhra Pradesh-salient features, constraints, sub sectors of agribusiness-input sector, production sector, processing sector.

Module-4

Growth performance of major agricultural commodities in Andhra Pradesh-production and processing trends in exports and imports of major agricultural commodities.

Module-5

Marketing policy- structure of agri markets - regulated markets - need - activities - structure - APMC act - market legislations - Role of Farmer Groups in the marketing of Agricultural Produce.

F. Prasad

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B. A. ECONOMICS

III Year B. A. Programme (UG) Courses – Under CBCS

10 Semester – VI

Paper – ~~VIII-A~~; Cluster Elective – A: Agribusiness

Paper VIII-A-2: Agricultural Output Marketing

Module-1

Structure and Model of Agri-Marketing Organizations with functions: Functions of intermediaries, Marketing Practices in Primary and secondary and terminal market, Regulated markets, co-operative marketing.

Module-2

Marketing costs and margins, Marketing Finance. Marketing Structure of Major agricultural commodities, food grains: Rice, and Maize. Cash Crops; Cotton, Oil Seeds, Vegetables and Fruits, Milk, Meat and Poultry products.

Module-3:

Problems and Challenges in Agriculture Marketing - Market Yards - Support prices - Rural Warehousing.

Module-4:

State Intervention in Agricultural Marketing, Role of Various agencies (Andhra Pradesh Agro, MARKEED, State Department, and FCI, Tobacco Board, Cotton Corporation) and its impact on market efficiency. Agriculture Price Commission.

Module-5:

Inter-regional and international trade in agriculture; emerging scenario of international trade in agricultural commodities; concept of terms of trade and balance of payments,. WTO and Indian agriculture with special reference to Andhra Pradesh .

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

(AUTONOMOUS) VUYYURU (2019 – 2020)

PAPER CODE :- 604CE

SEMESTER - VI

ECONOMICS CLUSTER PAPER- 3 i.e.

Project Work

SUGGESTIVE TOPICS ON CURRENT ECONOMICS PROJECT

1. EVENT ECONOMICS PROJECT [2017-18]
2. CURRENT INDIA'S ECONOMIC EVENTS – WHAT'S GOING AROUND
3. BANK RECAPITALISATION PLAN
4. MAKE IN INDIA
5. DIGITAL INDIA
6. DISINVESTMENT –MUDRA YOJANA
7. SWADESH DARSHAN YOJANA
8. START UP INDIA
9. GST
10. DEMONETISATION
11. SELF HELP GROUP
12. INCLUSIVE GROWTH STRATEGY
13. INFLATION
14. INDIA - A VIBRANT MARKET FOR SOLAR INDUSTRY
15. NATIONAL INTELLECTUAL PROPERTY RIGHT POLICY 2016
16. HUMAN DEVELOPMENT INDEX
17. MICRO AND SMALL SCALE INDUSTRIES
18. BANK'S NPA [NON PERFORMING ASSETS].
19. IMPACT OF FREQUENT RISE IN PERTROL PRICES
20. SUBSIDIES
21. FOREIGN DIRECT INVESTMENT
22. SPECIAL ECONOMIC ZONE
23. INFRASTRUCTURE
24. DIGITAL MONEY WILL REPLACE PAPER MONEY

**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


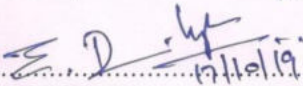
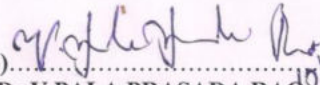
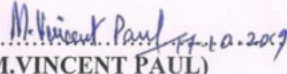
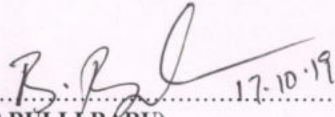

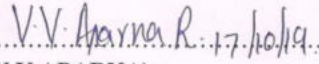

DATE

17th October, 2019

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 17-10 -2019 in the English Language Laboratory at 10:00 am.

Ms G.Soni ... Presiding

Members Present:

- | | | | |
|------------------------------------|---|-----------------------------|---|
| 1).....
(G.SONI) | 
17/10/19 | Chairman | Head, Department of English
AG & SG S Degree College
Vuyyuru-521165 |
| 2).....
(Dr.E.DILEEP) | 
17/10/19 | University
Nominee | Professor,
Department of English
Krishna University,
Machilipatnam. |
| 3).....
(Dr.V.PALA PRASADA RAO) | 
17/10/19 | Academic Council
Nominee | Lecturer,
Department of English
JKC College, Guntur. |
| 4).....
(M.VINCENT PAUL) | 
17.10.2019 | Academic Council
Nominee | Head,
Department of English
Sir C.R.Reddy College,
Eluru |
| 5).....
(B.BULLI BABU) | 
17.10.19 | Member | Lecturer in English
AG & SG S Degree College,
Vuyyuru-521165 |
| 6).....
(M.ROJA) | 
17/10/19 | Member | Lecturer in English
A.G & S.G.S Degree College,
Vuyyuru-521165 |
| 7).....
(R.V.V.APARNA) | 
17.10/19 | 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) | 
17/10/19 | Member | Soft skills Trainer,
Procurement Specialist,
DuPont, Hyderabad |

Agenda for B.O.S Meeting of General English for II SEMESTER
for the Academic Year 2019-20

1. To recommend syllabi for 2nd semester of I Degree students of all disciplines for the Academic Year 2019-20.
2. To recommend the Model Question Paper of 2nd semester of I Degree of all disciplines for the Academic Year 2019-20.
3. To recommend the Guidelines to be followed by the question paper setters in General English for the 2nd semester-end exams of I Year students of all disciplines
4. To recommend the teaching and evaluation methods to be followed under Autonomous status.
5. To implement Certificate Course on “Competitive English” for the II year students of IV Semester.
6. Any suggestions regarding Certificate/Add-on Courses, Seminars, Workshops, Guest Lectures and student competitions to be organized.
7. Any other matter.

RESOLUTIONS

1. Discussed and recommended the syllabus for 2nd Semester of I Year students of all disciplines for the approval of the Academic Council.
2. Discussed and recommended the Question paper pattern for the 2nd Semester of I Year students 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 General English for 2nd semester of first degree students of all disciplines 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 an LCD projector, display on U boards 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 for 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.

8. Nil.

Signatures of the BOS Members:

Dr.E.DILEEP
(University Nominee)

E. Dileep
17/10/19

Dr.V.PALA PRASADA RAO
(Academic Council Nominee)

V. Pala Prasada Rao
17/10/19

Sri M.VINCENT PAUL
(Academic Council Nominee)

M. Vincent Paul
17.10.2019

B.BULLI BABU
(Member)

B. Bulli Babu
17.10.2019.

M.ROJA
(Member)

M. Roja
17/10/19

R.V.V.APARNA
(Member)

V.V. Aparna R.
17/10/19.

Dr.G.PRIYANK VARMA
(Member)

MEGHANA GRACE MICHAEL
(Member)

Megha Grace M

G. Sankar
Chairman
17/10/19

**A.G & S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,
VUYYURU – 521165**
(An Autonomous College in the Jurisdiction of Krishna University, Machilipatnam.)
Accredited with “A” Grade by NAAC, Bengaluru

Semester - II
COURSE STRUCTURE

Academic Year	2019-20
Title of the paper	General English
Semester	II
Course code	ENG 201C
CIA marks	30
Semester End Marks	70
Total Marks	100
Year of Introduction	2017-18
Year of Revision	2018-19
% of revision	10%

Academic Year 2019-20
Changes made in the syllabus
Semester-II General English

Course content suggested by APSCHE	Additions	Deletion
<p>Unit – I PROSE 1. The Scientific Point of View 2. My Struggle for an Education</p> <p>Unit – II POETRY 1 Ode to Autumn 2. I am not that Woman</p> <p>Unit –III SHORT STORY 1. The Boy Who Broke the Bank 2. Half a Rupee Worth</p> <p>Unit – IV ONE ACT PLAY The Proposal</p> <p>Unit – V LANGUAGE ACTIVITY 1. Classroom and Laboratory Activities i. Transformation of Sentences (Voice, Speech, Degrees & Simple, Compound and Complex) ii. Dialogue Practice (Oral) iii. Listening Comprehension 2. Classroom Activity i. Guided Composition ii. Dialogue Writing iii. Reading Comprehension</p>	<p>Unit – I PROSE 3. Dr.B.R.Ambedkar : Pride, Awkwardness and a Dangerous accident in Chalisgaon.</p> <p>Unit – V Question Tags</p>	<p style="text-align: center;">Nil</p>

- In Unit- I, A new prose lesson “**Pride, Awkwardness and a Dangerous accident in Chalisgaon**” by Dr.B.R.Ambedkar is incorporated as to create awareness on cultural issues faced by Dr.B.R.Ambedkar at his time.

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ENGLISH	ENG 201C	2019-2020	B.A,B.Com & B.Sc
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GENERAL ENGLISH
SEMESTER – II (CBCS)
PAPER – I

Unit – I

PROSE

1. J. B.S Haldane: The Scientific Point of View
2. Booker T. Washington: My Struggle for an Education
3. Dr. B.R. Ambedkar : Pride, Awkwardness and a Dangerous accident in Chalisgaon.

Unit – II

POETRY

1. John Keats: Ode to Autumn
2. Kishwar Naheed : I am not that Woman
(from *An Anthology of Commonwealth Poetry* edited by C.D. Narasimhaiah)

Unit –III

SHORT STORY

1. Ruskin Bond: The Boy Who Broke the Bank
2. R. K. Narayan: Half a Rupee Worth

Unit – IV

ONE ACT PLAY

Anton Chekhov: The Proposal

Unit – V

LANGUAGE ACTIVITY

1. Classroom and Laboratory Activities

- i. Transformation of Sentences (Voice, Speech, Degrees & Simple, Compound and Complex)
- ii. Dialogue Practice (Oral)
- iii. Question Tags
- iv. Listening Comprehension

2. Classroom Activity

- i. Guided Composition
- ii. Dialogue Writing
- iii. Reading Comprehension

Reference Book:

Engage with English (for Semester-II) - Published by Orient Black Swan

ENGLISH	ENG 201C	2019-2020	B.A,B.Com & B.Sc
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Time: 3 hours

GENERAL ENGLISH

Max Mark: 70

The Pattern of the Question Paper – I for Semester –II: ENG 201C

Section-A

- I. Answer any TWO of the following in 75 words each:** **2x5 = 10 M**
(4 paragraph questions from Prose)
- II. Answer any TWO of the following in 75 words each:** **2x5 = 10M**
(4 paragraph questions from Poetry)
- III. Answer any TWO of the following in 75 words each:** **2x5 = 10M**
(4 paragraph questions from Short Story)
- IV. Answer any TWO of the following in 75 words each:** **2x5 = 10M**
(4 paragraph questions from One-Act Play)

Section – B

(Language Activity)

- V. Rewrite the following sentences as directed:** **10 Marks**
- a) Voice – 3 Marks (5 sentences to be given)
- b) Direct and Indirect Speech -3 Marks (5 sentences to be given)
- c) Degrees of Comparison -3 Marks (5 words to be given)
- d) Simple, Compound and Complex Sentences -1 Mark (3 sentences to be given)
- VI. Add Question Tags to any FIVE of the given sentences (8 Sentences to be given)** **5 Marks**
- VII. Read the given conversation and fill in the blanks** **5 Marks**
- VIII. Write a dialogue with FIVE exchanges on any ONE of the given contexts.** **5 Marks**
(TWO contexts to be given)
- IX. Read the paragraph and answer the questions from the given appropriate options.** **5 Marks**

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**SEMESTER – II (CBCS)
GENERAL ENGLISH, PAPER – I**

Time: 3 hours

Max Mark: 70

Model Question Paper

SECTION –A

I. Answer any TWO of the following in 75 words each. 2x5=10M

1. How does Haldane respond to the suggestion that man must ‘return to nature’?
2. Are Science and religion said to be contradictory in their thinking? Explain.
3. What did Booker have to go through in order to get admission to the Hampton Institute?
4. Why did Booker T. Washington feel that the examination he passed to gain admission into the Hampton Institute was the best one he ever passed?

II. Answer any TWO of the following in 75 words each. 2x5=10M

1. What are the special features of the autumn season according to John Keats?
2. Analyze the poem ‘Ode to Autumn’ in your own words.
3. Examine the theme of captivity in the poem ‘I am not that Woman’.
4. Is the poem ‘I am not that Woman’ about empowerment? Illustrate.

III. Answer any TWO of the following in 75 words each. 2x5=10M

1. How did people react to the rumour of the imminent collapse of the bank? What did they tell each other? What new rumours started to spread?
2. Enumerate the steps taken by the bank manager to resolve the crisis.
3. Examine the theme of greed in the story ‘Half a Rupee Worth’.
4. Describe the character of Subbaiah. Does it change over time?

IV. Answer any TWO of the following in 75 words each. 2x5=10M

1. Make a brief sketch of social life as you find in the play “The Proposal”.
2. Sketch the character of Natalya Stepanovna.
3. Bring out the irony/satire and humour in the play ‘The Proposal’.
4. Compare and Contrast the characters of Chubukov and Lomov.

V. Rewrite the sentences as directed.

A. Rewrite any THREE of the following sentences in the passive voice. 3x1=3M

1. My sister will cook dinner tonight.
2. Give him some money
3. The doctor asked us many questions
4. Did you understand the lesson?
5. When do they open the gate?

B. Rewrite any THREE of the following sentences in indirect speech 3x1=3M

1. You said to me, 'You must give me your email id'.
2. Sudha said to us, 'Let us go to the Upstate emporium today'.
3. Mohan said to me, 'Don't put your things here'.
4. I said to her, 'Will you teach me knitting?'
5. They said to me, 'Oh, we are delighted to be in your class!'

C. Write the comparative and the superlative degrees to any THREE of the following words. 3x1=3M

1. dependent
2. many
3. heavy
4. low
5. ill

D. Transform any ONE of the following sentences. 1M

1. I have informed him that he has succeeded.(change into simple sentence)
2. She was too poor to educate her children. (change into compound sentence)
3. I have no money to lend you. (change into complex sentence)

VI. Add Question Tags to any Five of the following sentences. 5x1=5M

1. She draws a beautiful picture, _____?
2. We came home late last night, _____?
3. No one will hear us, _____?
4. Your uncle goes jogging every day, _____?
5. The authorities will see to the problem, _____?
6. You came by train, _____?
7. He never drinks alcohol, _____?
8. Nobody left a message, _____?

VII. Read the following conversation and fill in the blanks.

5M

(After finishing his work in the bank, Sunil returns to his office.)

Boss : I have been looking for you, Mr. Sunil. Where have you been?

Sunil : _____

Boss : The bank! What did you do there?

Sunil : _____

Boss : Did you deposit a large sum there?

Sunil : _____

Boss : I see. How are the people there? Are they helpful?

Sunil : _____

Boss : Are you happy with the service you got?

Sunil : _____

VIII. Write a dialogue with FIVE exchanges on any one of the following contexts. 5M

You are a travel agent. A young couple visits your office and asks about arranging a visit to the Andaman Islands. They seek a number of clarifications before deciding on the trip. Write a dialogue.

Or

You are a sales assistant in a textile shop. A woman customer asks you to show her different kinds of sarees and to explain about their quality. Finally she leaves without buying anything. Write a dialogue.

IX. Read the following paragraph and answer the questions given below. Choose an appropriate option (i.e., A or B) from those given under each question and rewrite the entire sentence along with the answer. 5x1=5M

The Shah of Persia had heard of Birbal's intelligence and he wrote to Emperor Akbar requesting that Birbal be allowed to visit his court. Akbar was pleased because he was extremely proud of Birbal, and sent him to the Persian court in all splendour.

As soon as Birbal reached the Persian capital, the Shah sent for him. When he reached the royal audience chamber, he saw a semi-circular arrangement of seats. In each of them was a well-dressed regal figure and all of them were dressed exactly alike. Anyone of them could have been Shah of Persia. Birbal stopped for a while, then looked keenly, went and bowed the real Shah.

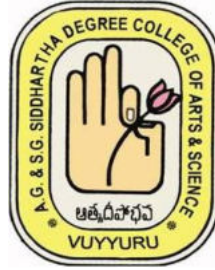
Taken aback by this, the Shah of Persia listened to Birbal's flowery address and replied in the same flowery language. Then he asked, "Birbal how did you recognize me?" Birbal replied to the question by saying "Your Majesty! When I looked round, I found everyone looking at you.

Only you did not look at anyone. I knew at once who the real Shah of Persia was.”The Shah bestowed upon Birbal the title Ocean of Intelligence by which men knew him ever after.

Questions:

1. The Shah of Persia invited Birbal because he wanted to
 - a. test his immense wisdom
 - b. test his well-known
2. In each seat sat a well-dressed regal figure. The phrase a regal figure here suggests
 - a. a royal person
 - b. a typical person
3. Emperor Akbar sent Birbal to Persia in splendour. The underlined phrase here means.
 - a. in all glory and pomp
 - b. in all majesty and glory
4. The Shah of Persia was taken aback by the way in which Birbal recognized him. In other words, he
 - a. was perturbed
 - b. was surprised
5. The author has used the flowery to show that Birbal
 - a. was a handsome man
 - b. was very learned

**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
17th October, 2019**

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 17-10-19 in the English Language Laboratory at 11:30 am.

Ms G.Soni ... Presiding

Members Present:

- 1).....  Chairman Head, Department of English
(G.SONI) AG & SG S Degree College
Vuyyuru-521165
- 2).....  University Professor,
(Dr.E.DILEEP) Nominee Department of English
Krishna University,
Machilipatnam.
- 3).....  Academic Council Lecturer,
(Dr.V.PALA PRASADA RAO) Nominee Department of English
JKC College, Guntur.
- 4).....  Academic Council Head,
(M.VINCENT PAUL) Nominee Department of English
Sir C.R.Reddy College,
Eluru
- 5).....  Member Lecturer in English
(B.BULLI BABU) A.G & S.G.S Degree College,
Vuyyuru-521165
- 6).....  Member Lecturer in English
(M.ROJA) A.G & S.G.S Degree College,
Vuyyuru-521165
- 7).....  Member Lecturer in English
(R.V.V.APARNA) A.G & S.G.S Degree College,
Vuyyuru - 521165
- 8)..... Member Assistant Professor,
(Dr.G.PRIYANK VARMA) Department of English,
SRM University,
Amaravati - A.P.
- 9).....  Member Soft Skills Trainer,
(MEGHANA GRACE MICHEAL) Procurement Specialist,
DuPont, Hyderabad

Agenda for B.O.S Meeting of the Foundation course in Communication Skills and Soft Skills for II & IV SEMESTERS for the Academic Year 2019-20

1. To recommend syllabus for 2nd semester of I Degree students of all disciplines for the Academic Year 2019-20.
2. To recommend the Model Question Paper of CSS for 2nd Semester-End examination of I Degree of all disciplines for the Academic Year 2019-20.
3. To recommend the Guidelines to be followed by the question paper setters in CSS for the 2nd semester-end exams of First Year students of all disciplines
4. To recommend syllabi of CSS for 4th semester of II Degree students of all disciplines for the Academic Year 2019-20.
5. To recommend the Model Question Papers of CSS for 4th semester of II Degree of all disciplines for the Academic Year 2019-20.
6. To recommend the Guidelines to be followed by the question paper setters in CSS for the 4th semester-end exams of II Year students of all disciplines.
7. To recommend the teaching and evaluation methods to be followed under Autonomous status.
8. Any suggestions regarding Certificate/Add-on Courses, Seminars, Workshops, Guest Lectures and student competitions to be organized.
9. Any other matter.

RESOLUTIONS

1. Discussed and recommended the syllabus prescribed by Krishna University/APSCH for 2nd Semester of I year students of all disciplines for the approval of the Academic Council.
2. Discussed and recommended the Question paper pattern of CSS for II Semester-End examination of I year students 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 2nd semester of first degree students of all disciplines for the approval of the Academic Council.
4. Discussed and recommended the syllabus of CSS for 4th semester of Second Degree of all disciplines for the approval of the Academic Council.
5. Discussed and recommended the model question papers of CSS for 4th semester of Second degree of all disciplines for the approval of the Academic Council.
6. Discussed and recommended the guidelines to be followed by the question paper setters of CSS for 4th 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

7. Discussed and recommended the following teaching and evaluation methods for the approval of Academic Council.

Teaching methods:

Besides the conventional methods of teaching, we use modern technology i.e. using of an LCD projector, display on U boards 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.
8. 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.
 9. The Department shall adapt the changes made by Krishna University and APSCH if any, in the later period deviating by 20% which is admissible in autonomy.
 10. If any changes in CSS syllabus (CSS- II & III) are made by Krishna University/APSCH, the same syllabus shall be incorporated as per the guidelines.

Signatures of the BOS Members:

Dr.E.DILEEP
(University Nominee)

E. Dileep
17/10/19

Dr.V.PALA PRASADA RAO
(Academic Council Nominee)

V. Pala Prasada Rao
17/10/19

Sri M.VINCENT PAUL
(Academic Council Nominee)

M. Vincent Paul
17, 10, 2019

B.BULLI BABU
(Member)

B. Bulli Babu
17/10/19

M.ROJA
(Member)

M. Roja
17/10/19

R.V.V.APARNA
(Member)

V.V. Aparna R.
17/10/19

Dr.G.PRIYANK VARMA
(Member)

MEGHANA GRACE MICHAEL
(Member)

Megha Grace M
17/10/19

G. S. S. S.
Chairman
17/10/19

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CSS	CSS 201C	2019-2020	B.A,B.Com &B.Sc
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COMMUNICATION AND SOFT SKILLS -1 (CSS-1)
FOUNDATION COURSE SYLLABUS
Semester – II

Unit I: Vocabulary Building

- 1a. Prefixes and Suffixes
- 1b. Conversion
- 1c. Compounding
- 1d. Analogy
2. One-Word Substitutes
3. Words Often Confused
4. Synonyms and Antonyms
5. Phrasal Verbs

Unit II: Grammar – 1

1. Types of Verbs
2. Subject-Verb Agreement

Unit III: Grammar – 2

1. Meanings of Modals
2. Common Errors (Correction of Sentences)

Unit IV: Listening Skills

1. The Importance of Listening
2. Types of Listening
3. Barriers/Obstacles to Effective Listening
4. Strategies for Effective Listening

Unit V: Reading Skills

1. Skimming
2. Scanning
3. Intensive Reading and Extensive Reading
4. Comprehension

Reference Book:

English in Use – A Course in Communication Skills and Soft Skills -1
published by Orient Black Swan

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COMMUNICATION AND SOFT SKILLS -1 (CSS-1)
FOUNDATION COURSE - Semester – II
The Pattern of the Question Paper for CSS -1

Time: 2 Hours

Maximum Marks: 50

Part – A (Vocabulary Building)

1. Pick out one word substitute for the following expressions from the given options. **5 Marks**
2. Choose the correct option from the brackets. (Words often confused) **5 Marks**
2. Match the synonyms in the two columns **5 Marks**
3. Pick out the suitable antonyms for the following words. **5 Marks**
4. Choose the correct Phrasal Verb from the given options **5 Marks**

Part – B (Subject-Verb agreement)

Match the given types of verbs in column 'A' with column 'B'. **5 Marks**

Part – C (Common Errors)

Correct any FIVE of the following underlined/italicized part of the given sentences

(8 sentences to be given) **5 Marks**

Part – D (Listening Skills)

Answer any One Essay question on Listening skills (3 questions to be given) **10 Marks**

Part – E (Reading Skills)

Answer the following questions from the Reading Comprehension (Interview Transcript to be given – 5 questions) **5 Marks**

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CSS	CSS 201C	2019-2020	B.A,B.Com & B.Sc
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COMMUNICATION AND SOFT SKILLS -1 (CSS-1)
FOUNDATION COURSE - Semester – II

Time: 2 Hours

Maximum Marks: 50

Model Question Paper

Part- A

1. Pick out one word substitute for the following expressions from the given options. 5M

1. The way somebody looks or behaves
 a) Enigma b) Demeanour
2. One who pursues noble principles and goals
 a) Idealist b) Feminist
3. Longing for the past
 a) Progeny b) Nostalgia
4. One who always expects negative things to happen
 a) Optimist b) Pessimist
5. Something which cannot be expressed
 a) Indelible b) Inexpressible

2. Choose the correct option from the brackets given below.

5x1=5

1. I can resist anything _____ (accept/except) temptation.
2. The loud noise from the motor _____ (affect/effect) my hearing for days.
3. Please lay that pipe _____ (beside / besides) the car in the garage.
4. Please do not _____ (lie / lay) on that sofa.
5. The _____ (stationary / stationery) store sells personalized envelopes.

3. Match the synonyms in the two columns

5M

A	B
Faith	Right
Dirty	Belief
Correct	Collect
Fraud	Filthy
Gather	Cheat

4. Pick out the suitable antonyms for following words

5M

1. Exclude
 a) Include b) Undo
2. Lend
 a) Convict b) Borrow
3. Timely
 a) Untimely b) Oversize
4. Clockwise
 a) Inactive b) Anticlockwise
5. Compulsory
 a) Guilty b) Optional

5. Choose the correct Phrasal Verb from the options given below.

5M

1. Quick! _____ the bus. It's ready to leave.
a. get on b. call for c. try on
2. I don't know where my book is. I have to _____ it.
a. take off b. look for c. put out
3. It's dark inside. Can you _____ the light, please?
a. switch on c. believe in c. made up
4. _____ the form, please.
a. called off b. keep up c. fill in
5. I need some new clothes. Why don't you _____ these jeans?
a. passed away b. carried away c. try on

PART – B

6. Match the following types of verbs in column 'A' with column 'B'.

5x1=5 M

A	B
1. Main Verb	A. <u>Does</u> Sam write all his own reports?
2. Auxiliary Verb	B. It's time to <u>get on</u> the plane.
3. Gerund	C. They <u>jumped.</u>
4. Phrasal Verb	D. Daniel quit <u>smoking</u> a year ago.
5. Intransitive Verb	E. My mother <u>cooks</u> well.

PART-C

7. Correct any FIVE of the following underlined/italicized part of the sentences.

5M

- a) The news are good.
- b) My bicycle is inferior to your.
- c) The four men quarreled with each other.
- d) We went to Delhi in train.
- e) I prefer tea than coffee.
- f) Where is the scissors?
- g) He said that he is young.
- h) Don't make noise.

PART- D

8. Answer any ONE of the following questions in about 150 words.

10M

- 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?

PART – E

9. Read the following Transcript and answer the questions that follow.

5M

Interviewer: Could you tell us something about your background and how you reached the national level in cricket?

Dhoni: Well, I grew up in Ranchi, in the state of Jharkhand, where not much cricket is played. So it was rather difficult for me to reach the national level. Actually, I started off as a footballer, but after a couple of years I shifted to cricket, while I was still in school. I managed to get into the under-16 state team and then the under-19 team. I made my debut in the Ranji Trophy tournament in 1999-2000. My performance in domestic tournaments was quite consistent. Then, last year, I was selected for the India-A team that toured Kenya and Zimbabwe, and that was the turning point for me. I played well on that tour and later got into the Indian team on the tour of Bangladesh.

Interviewer: You are one of the hardest hitters of the ball in the game. What is the secret of 'Dhoni Power'?

Dhoni: I don't know if there is any secret. I seldom go to a gym for workouts. But may be the training I received as a footballer has helped.

Interviewer: What about the story of the 4 liters of milk that you are said to drink everyday?

Dhoni (laughing): I'm afraid that's a bit of an exaggeration. But yes, I do love milk and drink about a litre a day. Earlier, it used to be just plain milk, but now it's mostly milk with hot chocolate.

Interviewer: Not only do you hit those big sixes, but you are also an excellent runner between the wickets, in spite of the conditions being hot and humid. So are you a fitness freak?

Dhoni: Not really. I think it just comes naturally to me. You know, my family is from Almora, from the mountains of Uttaranchal. One has to be very fit to live there. I suppose physical fitness must be in my genes, although I have never actually lived in the mountains. But I am working hard on my fitness right now, following the training schedule given by Gregory King, our trainer.

Interviewer: What aspects of your game do you want to improve?

Dhoni: My batting as well as my wicket keeping. I would love to improve my wicket keeping, especially against the spinners. We have quality spinners in our team like Harbhajan and Anil Kumble, and it's really difficult to keep wickets when they are bowling. So that's one thing I must improve. And, of course, my batting. I have been shifted quite a lot in the batting order, from batting at number 6 or 7 to batting at number 3, or even opening the innings. So the more I play, the more I must get used to different batting slots. Lots of things are going on in my head...

Interviewer: How do you spend your day when you are not playing in matches?

Dhoni: Oh, I listen to a lot of music. I love music, you know. Then, I love motorbikes, I enjoy riding my motorbike. And I like playing computer games. I play a bit of badminton when I get time. But I love bikes more than anything else.

Questions:

- a) Why was it difficult for Dhoni to find a place in the Indian cricket team?
- b) When was Dhoni selected for a national team?
- c) What makes Dhoni special as a cricketer?
- d) What does Dhoni have to say about his batting?
- e) What is Dhoni's favourite way of relaxing?

A.G & S.G SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE, VUYYURU
(An autonomous college in the Jurisdiction of Krishna University, Machilipatnam.)

Accredited at 'A' Grade by NAAC

CSS	CSS 401C	2019-2020	B.A,B.Com &B.Sc
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COMMUNICATION AND SOFT SKILLS -3 (CSS -3)

FOUNDATION COURSE SYLLABUS

Semester – IV

Unit I: Soft Skills

1. Positive Attitude
2. Body Language
3. SWOT/SWOC Analysis
4. Emotional Intelligence
5. Netiquette

Unit II: Paragraph Writing and Para Jumbles

1. Paragraph Structure
2. Development of Ideas
3. Matching Para Jumbles

Unit III: Paraphrasing and Summarizing

1. Elements of Effective Paraphrasing
2. Techniques for Paraphrasing
3. What Makes a Good Summary?
4. Stages of Summarizing

Unit IV: Letter Writing

1. Letter Writing (Formal and Informal)
2. E-correspondence

Unit V: Job Application, CV and Dialogue Writing

1. Resume and CV
2. Dialogue Writing

Reference Book: English in Use –A Course in Communication Skills and Soft Skills -3,
Published by Orient Black Swan

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CSS	CSS 401C	2019-2020	B.A,B.Com &B.Sc
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COMMUNICATION AND SOFT SKILLS -3 (CSS-3)
FOUNDATION COURSE - Semester – IV
The Pattern of the Question Paper for CSS -3

Time: 2 Hours

Maximum Marks: 50

SECTION - A

- I.** Answer any ONE of the following questions in two or three paragraphs
(4 questions to be given) **1x10=10 M**

SECTION – B

- II.** Develop the given hints into a meaningful paragraph **1x5=5 M**
- III.** Matching jumbled sentences in the given columns **5x1=5 M**

SECTION – C

- IV.** Write a paragraph on any ONE of the given proverbs (3 proverbs to be given) **1x5=5M**
- V.** Write a note on the differences between a paraphrase and a summary? **1x5=5M**

(OR)

What are the stages involved in summary writing?

(Internal choice to be given between paraphrase and summary)

SECTION – D

- VI.** Write a letter on any ONE of the given contexts **1x5=5 M**
(3 contexts to be given)
- VII.** Write an e-mail on any ONE of the given contexts **1x5=5M**
(3 contexts to be given)

SECTION –E

- VIII.** Write a Resume/CV responding to the given advertisement **1x5=5M**
- IX.** Write a dialogue with FIVE exchanges on any ONE of the given contexts. **1x5=5M**

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Accredited at 'A' Grade by NAAC

CSS	CSS 401C	2019-2020	B.A,B.Com &B.Sc
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**COMMUNICATION AND SOFT SKILLS -3 (CSS-3)
FOUNDATION COURSE, SEMESTER – IV (CBCS)
CSS – III**

Time: 2 hours

Max Mark: 50

Model Question Paper

SECTION – A

I. Answer any ONE of the following questions in two or three paragraphs. 1X10=10M

- a. 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?
- b. How do you define non-verbal communication? Is it different from verbal communication?
- c. Aruna is twenty-one years old. She has just appeared for her final B.com examinations. She is a very sincere student and also an excellent painter. She has won many art competitions. When she graduates, her parents want her to start working because the family needs financial support. Prepare a SWOT/SWOC analysis for Aruna.
- d. Define Emotional Intelligence and discuss the qualities of emotionally intelligent people.

SECTION – B

II. Develop the given hints into a meaningful paragraph.

1X5=5M

The kind of books I enjoy reading: enjoy fiction most – novels and short stories – love romances and thrillers – long hours reading – science fiction not interesting – dull – also enjoy travelogues, biographies, real—life adventures read newspapers, magazines regularly to keep myself informed – to pass time when no new book.

III. Match the jumbled sentences in Column A with Column B**5X1=5M**

A	B
1. I was put on hold for a long time. I am still waiting for John	a. Well, it is pretty hard for me to fall asleep when I go to bed. I also woke up many times during the night.
2. How about some soft drinks?	b. They will be available in two weeks. Don't stress yourself. I think everything will be OK.
3. What are you going to do during Winter break?	c. No, buy some bottled water instead. It is healthier for us. We need to cut down on our intake of sugar, as too much sugar is not good for our bodies.
4. I am anxious to know my cholesterol level. When will I get the results of the blood test?	d. I am so sorry. Let me connect you to him right now.
5. Did you suffer from insomnia?	e. I will head home to spend time with my parents.

SECTION – C**IV. Write a paragraph on any ONE of the following proverbs****1X5=5M**

- a) Fortune favours the brave
- b) Necessity is the mother of invention
- c) Actions speak louder than words

V. Write a note on the differences between a paraphrase and a summary?**1x5=5M****(OR)**

What are the stages involved in summary writing?

SECTION – D**VI. Write a letter on any ONE of the following contexts.****1X5=5M**

- a. Write a letter to your parents about your experience of settling into your new hostel room. Don't forget to mention your room-mate, and what you like or don't like about the place.
- b. Write a letter to your uncle/ aunt, thanking him / her for the birthday gift you have received. Don't forget to say why you like the gift, and include other relevant information such as how you celebrated your birthday.
- c. Write a letter to make a business inquiry about the children stories / textbooks available in that company.

**ADUSUMILLI GOPALAKRISHNAIAH & SUGAR CANE
GROWERS SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE, VUYYURU-521165, KRISHNA Dt., A.P.
(AUTONOMOUS)**

DEPARTMENT OF ENVIRONMENTAL STUDIES

2019-2020



BOARD OF STUDIES

Minutes of Meeting


27-04-2019

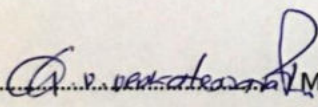
Minutes of the meeting of Board of studies in Human values & Professional Ethics for the Autonomous courses of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 10.30 A.M on 27-04-2019 in the Department of Human values & Professional Ethics

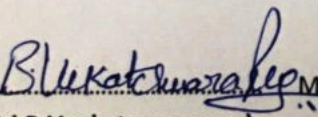
Sri R.V. Sivarao ... *Presiding*

Members Present:

- 1).....*R.V. Sivarao*..... Chairman Head, Department of Environmental Studies
(Sri.R.V. Sivarao) AG & SG S Degree College of Arts & Science
Vuyyuru.

- 2).......... University Asst. Professor
(Dr.P.Sujatha) Nominee Krishna University
Machilipatnam.

- 3).......... Member Manager P.R.O
(Sri.CH.V.Venkateswararao) K.C.P Sugar and I.C Ltd
Vuyyuru.

- 4).......... Member K.T.R Womens College
(Sri.B.Venkateswararao) Lecturer in commerce
Gudivada.

- 5).....*N. Ramarao*..... Member Lecturer in Economics
(Sri.N.Ramarao) AG & SG S Degree College of Arts & Science
Vuyyuru.

Agenda for B.O.S Meeting

1. To recommend the syllabi for I, semester of I Degree B.A, B.com B.SC , Human values & Professional Ethics Paper Under CBC System for the Academic year 2019-2020.
2. To recommend the Teaching and Evaluation Methods to be followed under Autonomous Status.
3. Any other matter.

RESOLUTIONS

1). Discussed and Recommended The Syllabi, Model Question Papers Under CBC System and Guidelines to be followed by the Question paper Setters of I Semester of I degree B.A,B.COM , B.SC for the Approval of the Academic Council (enclosed) for the Academic year 2019 – 20120.

2). Discussed and Recommended the Teaching and evaluation methods for approval of Academic Council.

A) Teaching methods:

Besides the conventional methods of teaching, it is also resolved to use various other methods like Group discussions, Quiz, for the better understanding of the contents.

B) Evaluation of a student is done by the following procedure:

a) There is no Internal Assessment Examinations.

b) Semester-End Examinations:

i) The maximum marks for Semester-End examinations shall be 50 and duration of the examination shall be 2 Hours.

ii) Semester-End examinations shall be conducted at the end of I semester.

3) 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.

R.V.Sivakum
Chairman

ENVIRONMENTAL STUDIES

2019-20

Common for BA/B.Com/BSc Programmes

COURSE CODE: ENS101 Semester – I (Total 30 Hours)

Unit-I : Natural Resources:

Definition, scope and importance. Need for public awareness. Brief description of; Forest resources: Use and over-exploitation. Deforestation; timber extraction, mining, dams. Effect of deforestation environment and tribal people Water resources: Use and over-utilization. Effects of over utilisation of surface and ground water. Floods, drought. Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources. Food resources: World food problems, Effects of modern agriculture; fertilizer-pesticide, salinity problems. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Land resources: Land as resources, land degradation, man induced landslides, soil erosion and desertification

Unit-II : Ecosystems, Biodiversity and its conservation

Concept of an ecosystem Structure and function of an ecosystem Producers, consumers and decomposers Food chains, food webs and ecological pyramids Characteristic features of the following ecosystems:- Forest ecosystem, Desert ecosystem, Aquatic ecosystem. Value of biodiversity: Consumptive use, productive use. Biodiversity in India. Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts. Endangered and endemic species of India Conservation of biodiversity

Unit-III : Environmental Pollution

Definition Causes, effects and control measures of :- a. Air pollution b. Water pollution c. Soil pollution d. Noise pollution Solid waste management; Measures for safe urban and industrial waste disposal Role of individual in prevention of pollution Disaster management: Drought, floods and cyclones

Unit-IV : Social Issues and the Environment

From Unsustainable to Sustainable development Water conservation, rain water harvesting, watershed management. Climate change, global warming, ozone layer depletion, Environment protection Act Wildlife Protection Act, Forest Conservation Act

Unit-V : Human Population and the Environment

Population explosion, impact on environment. Family welfare Programme Environment and human health Women and Child Welfare Value Education Role of Information Technology in Environment and humanhealth.

Reference Books :

1. Environmental Studies by Dr.M.Satyanarayana, Dr.M.V.R.K.Narasimhacharyulu, Dr.G. Rambabu and Dr.V.VivekaVardhani, Published by Telugu Academy, Hyderabad.
2. Environmental Studies by R.C.Sharma, Gurbir Sangha, published by Kalyani Publishers.

AG&SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCES –AUTONOMOUS

VUYYURU-521165

SEMESTER –III

MODEL QUESTION PAPER

COURSE CODE – ENE-301

Common for BA/B.Com/BSc Programmes

PAPER TITLE: ENVIRONMENTAL EDUCATION

DURATION :2 HOURS

SECTION – A

Max:50

ANSWER ANY FOUR OF THE FOLLOWING QUESTIONS

(4x5=20M)

1. Environmental Education.
2. Bio-Diversity
3. Deforestation
4. Global warming.
5. Floods
6. Forest Resources
7. Environmental laws
8. Chipko Movement.

SECTION – B

ANSWER ANY THREE OF THE FOLLOWING QUESTIONS

(3x10=30M)

9. Write an essay on Forest Resource?
10. Explain the Scope and importance of Environmental Studies
11. Give an account of Renewable Energy Resource?
12. Write an essay on Air Pollution?
13. What is Sustainable Development?
14. Give an Account on Environmental Acts?

3. Environmental Studies by Purnima Smarath, published by Kalyani Publishers.

ENTREPRENEURSHIP

Syllabus, For all Degree Programmes.

COURSE CODE: ENP403

Semester – IV (Total 30 Hrs)

Unit-I: Entrepreneurship: Entrepreneur Characteristics – Classification of Entrepreneurships – Incorporation of Business – Forms of Business organizations – Role of Entrepreneurship in economic development – Start-ups.

Unit-II: Idea Generation and Opportunity Assessment: Ideas in Entrepreneurships – Sources of New Ideas – Techniques for generating ideas – Opportunity Recognition – Steps in tapping opportunities.

Unit-III: Project Formulation and Appraisal : Preparation of Project Report –Content; Guidelines for Report preparation – Project Appraisal techniques –economic – Steps Analysis; Financial Analysis; Market Analysis; Technical Feasibility.

Unit-iv: Institutions Supporting Small Business Enterprises: Central level Institutions: NABARD; SIDBI, NIC, KVIC; SIDIO; NSIC Ltd; etc. – state level Institutions –DICs- SFC- SSIDC- Other financial assistance.

Unit-V: Government Policy and Taxation Benefits: Government Policy for SSIs- tax Incentives and Concessions –Non-tax Concessions – Rehabilitation and Investment Allowances.

Reference Books:

1. Arya Kumar, Entrepreneurship, Pearson, Delhi, 2012.
2. Poornima M.CH., Entrepreneurship Development –Small Business Enterprises, Pearson, Delhi, 2009
3. Michael H. Morris, ET. al., Entrepreneurship and Innovation, Cen gage Learning, New Delhi, 2011
4. Kanishka Bedi, Management and Entrepreneurship, Oxford University Press, Delhi, 2009
5. Anil Kumar, S., ET.al., Entrepreneurship Development, New Age International Publishers, New Delhi, 2011
6. Khanka, SS, Entrepreneurship Development, S. Chand, New Delhi.
7. Peter F. Drucker, Innovation and Entrepreneurship. 8. A.Sahay, M. S. Chhikara, New Vistas of Entrepreneurship: Challenges & Opportunities

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE VUYYURU
(AUTONOMOUS)
(MANAGED BY SIDDHARTHA ACADEMY OF GENERAL & TECHNICAL EDUCATION VIJAYAWADA)

Paper code: HVPE101

SEMESTER -I

MODEL PAPER

HUMAN VALUES PROFESSIONAL ETHICS (HVPE)

LIFE SKILLS COURSES UNDER CBCS FRAMEWORK WITH EFFECT FROM 2020-21

DURATION: 2 HOURS

SECTION - A

Max:50

ANSWER ANY FOUR OF THE FOLLOWING QUESTIONS

(4x5=20M)

1. Need for value education.
2. Process of value education.
3. Trust.
4. Samadhan .
5. Universal order.
6. Physical facilities.
7. Respect
8. Positive co-operation.

SECTION - B

ANSWER ANY THREE OF THE FOLLOWING QUESTIONS

(3x10=30M)

9. Explain the basic Guidelines for value education?
10. Explain the classification of value education?
11. Explain the Harmony in the family
12. Explain the problems faced due to differentiation in relation?
13. Write about locality towards goals and objectives?
14. Write about professional integrity?

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE VUYYURU
(AUTONOMOUS)
(MANAGED BY SIDDHARTHA ACADEMY OF GENERAL & TECHNICAL EDUCATION VIJAYAWADA)

SEMESTER -I

Paper code: HVPE101

GUIDELINESS
HUMAN VALUES PROFESSIONAL ETHICS (HVPE)

LIFE SKILLS COURSES UNDER CBCS FRAMEWORK WITH EFFECT FROM 2020-21

Marks	UNIT-I	UNIT-II	UNIT-III
	Value Education	Harmony	Professional Ethics in Education
5Marks	2	5	1
10Marks	2	2	2
Weight age	30	45	25

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

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

Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF HINDI

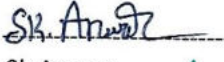
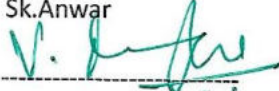
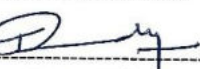


MINUTES OF BOARD OF STUDIES

EVEN SEMESTER

16-10-2019

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 16-10-2019 in the Department of Hindi.

Members Present:

1. 
Sk. Anwar
Chairman
Head of the Department of Hindi
AG & SGS Degree College
Of Arts & Science, Vuyyuru.
2. 
Dr. V. Mohan Rao
University Representative
Lecturer in Hindi,
SRR & CVR Govt. Degree College,
Vijayawada.
3. 
J. Ruidas
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 II semester of I degree in Hindi for the academic year 2019-20.
2. To discuss about the change of question papers of II semester for the academic year 2019-20.
3. To discuss about the evaluation ratio 70:30 for the II semester of I degree for the academic year 2019-20.
4. Any other matter.

Resolutions

1. It is unanimously resolved that there is no change in the syllabi II semester of I degree in Hindi for the academic year 2019-20.
2. It is unanimously resolved that there is no change in the model question papers II semester of I degree in Hindi for the academic year 2019-20.
3. It is unanimously resolved to follow the evaluation ratio 70:30 (External and Internal) for the I Degree for the academic year 2019-20.
4. Nil.



A.G. & S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYURU

An Autonomous College in the jurisdiction of Krishna University, Machilipatnam

Hindi	Hindi - 201C	2019-20	I Degree
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SYLLABUS FOR B.A., B.COM., B.Sc.,

II Semester - Hindi

Text Book	Gadya Sandesh
1. गद्य संदेश (Prose)	1. संस्कृति और साहित्य का परस्पर संबंध 2. भारत एक है 3. ऐच.आइ.वी (एड्स)
2. कथा लोक (Non-detailed)	कथा लोक 1. जरिया 2. भूख हडताल 3. परमात्मा का कुत्ता
3. व्याकरण (Grammar)	1. शब्दों का प्रयोग 2. संधिविच्छेद 3. शुद्ध करके लिखना
4. अनुवाद (Translation)	हिन्दी से अंग्रेजी
5. पत्र लेखन (Letter Writing)	अधिकारिक पत्र

A.G. & S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU
An Autonomous College in the jurisdiction of Krishna University, Machilipatnam

Hindi	Hindi - 201C	2019-20	I Degree
MODEL QUESTION PAPER (FOR B.A., B.COM., & B.Sc.)			
Time : 3 Hours	II 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. यह मानी हुई बात है कि वेदों से भी बढ़कर प्राचीनतम ग्रंथ अभी तक विश्व-भर में प्राप्त नहीं हुआ ।
 - B. विचारों की तकता जाति की सबसे बड़ी एकता होती है ।
 - C. इन दोनों रोगों के लिए समाज में नियमित और आवश्यक रूप से जागरूकता अभियान चलाने की आवश्यकता है ।
 - D. संस्कृति समाज की जान है और उसकी शान भी है ।
2. निम्न लिखित गद्यांशों में से किसी एक पाठ का सारांश लिखकर उसकी विशेषताओं पर प्रकाश डालिए । 12
 - A. संस्कृति और साहित्य का परस्पर संबंध
 - B. भारत एक है
3. निम्न लिखित कहानियों में से किसी एक कहानी का सारांश लिखकर उसकी विशेषताओं पर प्रकाश डालिए । 12
 - A. जरिया
 - B. भूख हडताल
4. निम्न लिखित में से किसी एक की टिप्पणी लिखिए । 8
 - A. नारायण राव का चरित्र चित्रण कीजिए ।
 - B. जरिया कहानी का उद्देश्य क्या है ?

Section - B

Grammar

सूचना के अनुसार बदलिए ।

5. निम्न लिखित शब्दों में से पांच की संधि विच्छेद कीजिए । 5 x 1=5
 - A. महर्षि
 - B. स्वागत
 - C. मरणोन्मुख
 - D. अन्तःपुर
 - E. ज्ञानोदय
 - F. वाग्देवी
 - G. सच्चिदानंद
 - H. प्राणेश्वर
 - I. चिन्मय
 - J. रामालय

6. निम्न लिखित में से किन्हीं चार वाक्यों का शुद्ध करके लिखिए । 4 x 1=4
- A. मोहन का घर में चार कमरा हैं ।
B. कृष्ण ने कंस को मारता है ।
C. वह उसका काम करता है ।
D. पेड में फल गिरता है ।
E. राम लंका पर चढाई किया ।
F. गोपाल ने किताब लाया ।
G. राजा दशरथ को चार पत्नी थे ।
7. निम्न लिखित में से किन्हीं चार शब्दों का वाक्यों में प्रयोग कीजिए । 4 x 1=4
- A. अज्ञानांधकार B. इकट्टा करना C. हवन
D. बसर करना E. पथ-प्रदर्शक F. तिनके का सहारा
G. दृष्टि गोचर होना H. हिस्सा लेना
8. निम्न लिखित में से किन्हीं तीन का सही कारक चिन्हों से वाक्य पूरा कीजिए । 3 x 1=3
- A. मोहन पत्र लिखा ।
B. पेड फल गिरता है ।
C. कृष्ण कंस मारा जाता है ।
D. हम समाज की सेवा करनी चाहिए ।
E. बुराई दूर रहना है ।
F. जयशंकर प्रसाद घर विद्या का अध्ययन किया था ।

Section - C

9. अंग्रजी में अनुवाद कीजिए । 3 x 1=3
- A. आबंटन B. स्वीकृति C. तदर्थ
D. वास्तविक E. स्पष्टीकरण F. महुँगाई भत्ता
10. हिन्दी सीखने की आवश्यकता बताते हुए अपने मित्र के नाम एक पत्र लिखिए । 7
अथवा
पुस्तक विक्रेता के नाम एक पत्र लिखिए ।

A.G. & S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU
An Autonomous College in the jurisdiction of Krishna University, Machilipatnam
Guidelines for II semester Hindi question paper for the Academic year 2019-20.

Time : 3 Hours

HIN - 201C

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
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 short stories to be set from Non-detailed out of which 1 to be answered. 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 Sandhi Viched : 10 words to be set, out of which 5 to be answered. 5 x 1=5
- Q. 6 Correct the sentences : 7 sentences to be set, out of which 4 to be answered. 4 x 1=4
- Q. 7 Usages : 6 words to be set, out of which 4 to be answered. 4 x 1=4
- Q. 8 Cases : 6 sentences to be set, out of which 3 to be answered. 3 x 1=3

Section - C

Translation and letter writing

- Q. 9 Translation : 6 words to be set, out of which 3 to be answered.
6 words to be set out of which 3 to be answered. 3 x 1=3
- Q. 10 Letter writing : 2 letters to be set, out of which 1 to be answered. 7 x 1=7

II Semester

Hindi to English

धोषणा पत्र	-	Declaration form
कटौती	-	Deduction
अर्ध सरकारी	-	Demi Official
प्रतिनियुक्ति	-	Deputation
लिखित प्रमाण	-	Documentary proof
नियत तिथि	-	Due date
विधिवत्	-	Duly
अर्जित छुट्टी	-	Earned leave
बयाना	-	Earnest money
पात्रता	-	Eligibility
अनुलग्नक	-	Enclosure
स्थापना	-	Establishment
कार्यकारिणी समिति	-	Execution Committee
पदेन	-	Ex-Officio
स्वच्छ प्रति	-	Fair copy
जाली दस्तावेज	-	Fake document
वित्तीय सहमति	-	Financial concurrence
स्वस्थता प्रमाण पत्र	-	Fitness Certificate
अग्रोषण	-	Forward
आगे की कार्रवायी	-	Further action
अनुदान	-	Grant
परिवाद समिति	-	Grievance committee
मुख्यालय	-	Head quarters
एतद्सह	-	Herewith
अवैतनिक	-	Honorary
मानदेय	-	Honorarium
पहचान पत्र	-	Identification card
कार्यन्वयन	-	Implementation

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

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

Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF HISTORY

MINUTES OF BOARD OF STUDIES

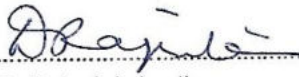


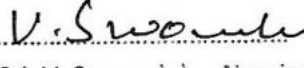

EVEN SEMESTER

15-10-2019

Minutes of the meeting of the Board of Studies in History of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 10.00A.M ON 15.10.2019 In the Department of History.

Dr. D. RAJYA LAKSHMI, HOD, History has Presided over the BOS meeting

Members Present:

- 1)  Chairman
(Dr. D. Rajyalakshmi) Head, Department of History
AG & SG S Degree College of Arts & Science
Vuyyuru-521165
- 2)  University Head, Department of
(Dr. G. Beulah Pearl Sunanda) Nominee History & Tourism
Maris 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. Swarnulu) Nominee Sir C. R. Reddy College
Eluru, W.G. Dist.
- 5)  Alumni Lecturer in AG&SG Siddhartha Jr. College, Vuyyuru.
(Sri K. Kiran) Nominee

AGENDA

1. To recommend any changes to the syllabi in 2nd, 4th, 6th Semesters of 1st, 2nd, 3rd Year B.A. History Papers for Academic Year 2019-2020.
2. To recommend the Blue Print and Model Question Papers of 2nd, 4th and 6th Semesters of Degree B.A. papers for the Academic Year 2019-2020.
3. To recommend the guidelines to be followed by the Question Paper Setters in History for the 2nd, 4th and 6th Semester-end exams.
4. To recommend the teaching and evaluation methods to be followed under Autonomous Status.
5. To suggest innovative methods of teaching.
6. Any other matter.

RESOLUTIONS

1. Discussed and recommend the syllabi without changes for the 2nd, 4th, 6th Semesters of 1st, 2nd & 3rd Year B.A. as it is of 2018-2019 Academic Year syllabi for 2019-2020.

2. Discussed and recommended the syllabi of 4th semester to add two topics of Durgabai Deshmukh & Sarojini Naidu in unit –IV of 2nd B.A. for the Academic Year 2019-2020.

a) Semester-II (HIS 201C): Paper-II. Early Medieval Indian History & Culture (From 600 to 1526 AD.)

b) Semester-IV (HIS401C): Paper-IV. Social Reform Movement & Freedom Struggle (From 1820-1947 AD.)

c) Semester-VI (HIS601GE, HIS602CE, HIS 603CE, HIS 604CE) Paper- HIS 601C– History of Modern Europe (From 19th Century to 1945AD), Cluster Electives –HIS-602CE, Cultural Tourism in Andhra Pradesh, HIS 603CE-Popular Movements in Andhra Desa (1848 to 1956AD), HIS 604CE-Contemporary History of Andhra Pradesh (1956 to 2014 AD)

3. Discussed and recommended the model question papers of 2nd, 4th and 6th semesters of B.A Degree.

4. Discussed and recommended the guidelines to be followed by the question paper setters of History for 2nd, 4th and 6th semesters B.A Degree.

5. 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:**

1. Out of maximum 100 marks in each paper, 30 marks shall be allocated for internal assessment. 1st, 2nd, 3rd & 4th Semesters of 1st, 2nd BA and 25 marks as internal assessment for 5th & 6th Semesters of IIIBA.

2. 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.

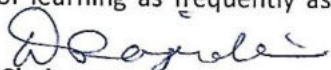
3. Whereas 5th and 6th semesters 15 marks are allocated for internal test the two tests will be conducted and average of these two tests shall be deemed as the marks obtained by a student, 5 marks for Assignment and remaining 5 marks are allocated for attendance under CBCS Pattern.

b) **Semester – End Examinations:**

1. The maximum marks for Semester-End examinations shall be 70 for IBA, IIIBA and 75 for IIIIBA, and duration of the examination shall be 3 Hours.

2. Semester-End examinations shall be conducted at the end of every semester.

6. 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.


Chairman

**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 HISTORY, SEMESTER – II(CBCS) PAPER-II

**SYLLABUS: Title of the Paper:EARLY MEDIEVAL INDIAN HISTORY & CULTURE
(From 600to 1526 A.D) Pass Marks 28**

Paper Code: HIS 201C (W.e.f. 2019-20) Max Marks 70

No.of Hours per week:5 No. of Credits:4

UNIT –I

20Hrs

Harsha& His Times ,Administration, Religion –Hiuen Tsang –Polity , Society and Culture from 7th to 11th Century A.D. Under Chalukyas of Badami&EsternChalukyas of Vengi.

UNIT – II

15 Hrs

Age of laterPallavas during 7th &8th Centuries A.D. contribution to cultural Development & art &Architecture:The Cholas from 9th to 12th Century A.D.: Rise of the Empire – Administration –and–Cultural Life.

UNIT – III

25Hrs

Conditions in India on the eve of Turkish Invasions; Traces of Arab Invasions, Ghazani&Ghori , DelhiSultanate (1206 -1290 A.D); under Slave Dynasty.

UNIT –IV

15Hrs

Delhi Sultanate (1290 -1526 A.D.)Khalgis: Expansion & Consolidation, Administrative &Economic Reforms ; The Tughlaqs Decline and Dis integration of the Delhi Sultanate Administration ,society ,Economy, Technology, Religion, Art &Architecture under the Delhi Sultanate .

UNIT –V

15Hrs

Cultural Development in India between 13th&15th Centuries A.D. Impact of Islam on Indian society &Culture – Bhakti &Sufi Movements Emergence of Composite Culture.

Reference Books

- 1.A.LSrivatsava-The Sultanate of Delhi.
- 2.Eswar Prasad- Short history of Muslim Rule in india.
- 3.K.H.Neelakantasastry –A History of South India.
- 4.HermanKulke (ed) The state in India .(A.D.1000-1700 A.D)
5. Mohammad Habib and K.A.Nizami(eds) comprehensive History of India, Vol-V,
The DelhiStatement.

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MACHILIPATNAM)

CLASS: I B.A

SEMESTER – II (CBCS)

PAPER-II

SYLLABUS: HISTORY Title of the Paper: INDIAN HISTORY AND CULTURE

(From 600to 1526 A.D)

Pass Marks 28

Paper Code: HIS 201C

(W.e.f. 2019-20)

Max Marks 70

Model Question Paper

SECTION - A

ANSWER ANY TWO OF THE FOLLOWING

5X2=10

- 1.Hiuen Tsang
- 2.Mahendravarma –I
- 3 .Razia Sultana
- 4 .Market Reforms of AllauddinKhilgi

SECTION -B

ANSWER ANY FOUR OF THE FOLLOWING 4X15=60

- 5.Asses the greatness of Harshavardhana
- 6.Give a brief account of the achievements of Pulakesin –II
7. Sketch the contribution ofPallavas to South Indian Culture.
- 8 .Bring out the salient features of Cholas Administration.
- 9.Give a brief account of Muhammad Ghazni’s invasions of India.
- 10.Criticallyexamine the Administrative reforms of Mahammad Bin –Tughlak .
- 11.Discuss the Socio, Economics Conditions of Delhi Sultanate
- 12.Write an essay on Bhakti Movement .

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SUBJECT- History	HIS 201C	I B.A
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TITLE:EARLY MEDIEVAL INDIAN HISTORY AND CULTURE
(From 600 A.D to1526 A.D)

Semester – II

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	1	2	1
Weightage	35	35	20	35	15

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CLASS: II B.A

SEMESTER – IV (CBCS) PAPER-IV

SYLLABUS: HISTORY Title of the Paper: Social Reform Movement & Freedom Struggle

(From 1820-1947A.D)

Pass Marks 28

Paper Code: HIS 401C

(W.e.f. 2019-20)

Max Marks 70

No.of Hours per week:5 No. of Credits:4

Unit – I

Socio –Religious & Self Respect Movements – Brahma Samaj – Arya Samaj – Theosophical Society – Ramakrishna Mission – Aligarh Movement – Emancipation of Women Struggle against Caste – Jyotiba Phule – Narayana Guru – Periyar and Dr. B. R. Ambedkar. (20hours)

Unit – II

Growth of Nationalism in the 2nd half of 19th Century-Impact of British Colonial policies under Viceroy's Rule and the Genesis of Freedom Movement –Birth of Indian National Congress (15hours)

Unit - III

-Freedom Struggle (1885-1920) Moderate Phase Partition of Bengal-Emergence of Militant Nationalism-Swadeshi&Boycott Movement –Home Rule Movement... (25hours)

Unit - VI

Freedom Struggle (1920-1947) Gandhiji's in Indian National Movement – Revolutionary Movements–Subhas ChandraBose.**Additional topics**-Durgabai Deshmukh & Sarojini Naidu .

- (15hours)

Unit – V

Muslim League &Growth of Communalism – Partition of India – Integration of Princely States into Indian Union – Sardar Vallabhai Patel. (15hours)

References:

Bipan Chandra, Indias struggle for Independence 1857-1947

Bipan Chandra, Modern India, NCERT, 1983 (Separate)

Hermann Kulke and Dietmar Rothermund, A History of India Rupa & Co 199*1.

Alladi Vaidehi, Freedom Movement in India (1858-1947)

Suruchi Thapon, Women in the Indian National Movement unseen faces and Unhand Voices, 1930-1942, Delhi, 2006

Raj Kumar, Ramesh Vari Desi & Romula Prulhi, Women's Role in Indian National Movement , Delhi 2003.

Tudeth Brown, Gandhi's Rise of Power 1915-1922.

Bipan Chandra, Nationalism and Colonialism in Modern India, 1977.

Anil Seal, Emergence of Indian Nationalism

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CLASS: II B.A

SEMESTER – IV (CBCS)

PAPER-IV

SYLLABUS: HISTORY Title of the Paper: : Social Reform Movement & Freedom Struggle

(From 1820-1947 A.D)

Pass Marks 28

Paper Code: HIS 401C

(W.e.f. 2019-2020)

Max Marks 70

Model Question Paper

SECTION - A

ANSWER ANY TWO OF THE FOLLOWING

5X2=10

- 1.Jyothiba Phule
- 2.Indian National Congress
- 3 .Balagangadhara Tilakh
- 4 .Simon Commission

SECTION -B

ANSWER ANY FOUR OF THE FOLLOWING

4X15=60

- 5.Explain the socio-religious movements in the 19th and 20th C. in India.
- 6.Asses the contribution of sir syed Ahmad Khan to Aligarh movement.
7. Discuss the factors that helped to the rise of Indian National Movement.
- 8.Describe the role of Moderates in Indian National movement.

9.What is the significance of Non –Co operation Movement .

10.Give a brief account of the contribution of Revolutionists to Indian Freedom Struggle.

11.Trace the events that led to the partition of India .

11.Estimate the role of Vallabhai Patel in the integration of Native states into Indian Union .

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SUBJECT- History	HIS 401C	II B.A
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TITLE: INDIAN HISTORY AND CULTURE

(From 1526 -1947A.D)

Semester – IV

Guidelines to the Paper Setter

Section	Unit – I	Unit – II	Unit – III	Unit - IV	Unit-V
A 5 Marks Questions	1	1	1	2	-
B 15 Marks Questions	2	1	1	2	2
Weightage	35	20	20	40	30

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(AN AUTONOMOUS COLLEGE IN THE JURISDICTION OF KRISHNA UNIVERSITY, MACHILIPATNAM)

III BA

Semester – VI (CBCS)

Paper – VII (General Elective)

**Subject; History, Syllabus, Title of the Paper – History of Modern Europe (from 19th Century to 1945
A.D)**

Paper Code ; HIS-601GE (w .e. f 2019 - 20)

No.of Hours for week:5

No. of Credits:4

Unit – 1

Industrial Revolution: Origin, Nature and Impact. (10 Hrs)

Unit – II

Unification Movements in Italy & Germany and their Impact. (25 Hrs)

Unit – III

Communist Revolution in Russia – Causes, Course and Results – Impact on World Order.(15 Hrs)

Unit - IV

World War I: Age of Rivalry in Europe between 1870 and 1914 – Results of the War – Paris Peace Conference - League of Nations.(20 Hrs)

Unit – V

World War II: Causes, Fascism & Nazism – Results; the United Nations Organization: Structure, Functions and Challenges.(20 Hrs)

References:

- 1 J.A.Hobson, Imperialism: A Study
- 2 C.D. Hazen, Modern Europe up to 1945
- 3 H.A.L.Fisher, History of Europe
- 4 C.M.M.Ketelbey, A History of Modern Times
- 5 Grant and Temperley (ed), Europe in the 18th and 20th Centuries
- 6 David Thomson, Europe Since Napoleon
- 7 A.P.J.Taylor, The Struggle for Mastery in Europe
- 8 S.P.Nanda, History of Modern World
- 9 S.N.Dhar, International Relations and World Politics Since 1919

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(AN AUTONOMOUS COLLEGE IN THE JURISDICTION OF KRISHNA UNIVERSITY, MACHILIPATNAM)

III BA. Semester – VI (CBCS) Paper – VII (General Elective)

Subject; History:

Title of the Paper – History of Modern Europe (from 19th Century to 1945 A.D)

Paper Code ; HIS-601GE

(w .e. f 2019-20)

Pass Marks: 30

Time : 3Hrs

Max. Marks : 75

Model Question Paper

SECTION – A

Answer any FIVE of the following

5x5=25

1. Karl Marx
2. Young Italy
3. Blood & Iron Policy
4. Lenin
5. Versailles Treaty
6. Wilson 14 points
7. Munich Pact
8. Atlantic Charter

SECTION – B

Answer any FIVE of the following

5x10=50

9. Write an essay on Industrial Revolution and its effects
10. Describe the main stages of unification of Italy
11. Briefly explain the different stages of unification of Germany
12. Analyse the causes for 1917 Russian Revolution
13. Give a brief account of the course of First World War
14. Discuss about the causes for the failure of League of Nations
15. Estimate the rise and fall of Fascism in Italy
16. Explain about the role played by America in Second World War.

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SUBJECT- History	HIS 601GE	III B.A
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TITLE:History of Modern Europe (from 19th Century to 1945 A.D)

Semester – VI

Guidelines to the Paper Setter

Section	Unit – I	Unit – II	Unit – III	Unit - IV	Unit-V
A 5 Marks Questions	1	2	1	2	2
B 10 Marks Questions	1	2	1	2	2
Weightage	15	30	15	30	30

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2019-2020



DEPARTMENT OF MATHEMATICS

MINUTES OF BOARD OF STUDIES

EVEN SEMESTER

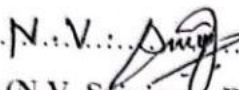
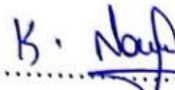
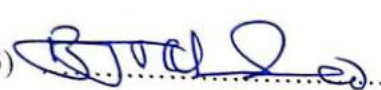
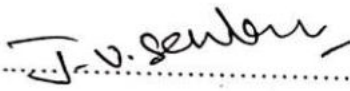
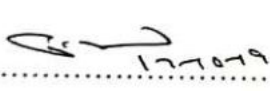
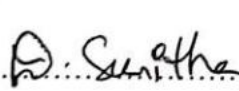
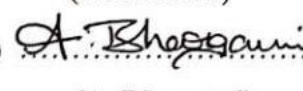
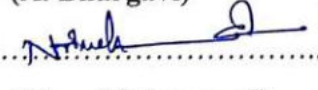
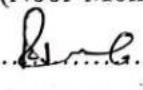
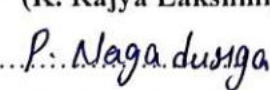
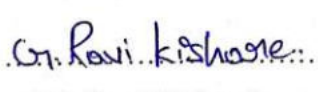
18-10-2019

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 10.30 A.M on 18-10-2019.

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) 
(P. Naga Durga) | Student Member | III B.Sc M.C.Cs
AG & SG S Degree College. |
| 11) 
(G. Ravi Kishore) | 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 2nd Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2019-20.
2. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Mathematics for 4th Semester as per the guidelines and instructions under CBCS prescribed by Krishna University and Foundation Course "Analytical Skills" for 4th Semester for all the second Degree students from the Academic Year 2019-20.
3. To discuss and recommend the Syllabi, Model Question Papers and Guidelines to be followed by question paper setters in Mathematics for 6th Semester as per the guidelines and instructions under CBCS prescribed by Krishna University from the Academic Year 2019-20.
4. 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 2nd Semester from the Academic year 2018-19 and followed same pattern for the Academic Year 2019 - 20.
2. 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 4th Semesters from the Academic year 2019-20. 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' and discussed and recommended that changes are required in Syllabi, Model Question Papers and Guidelines to be followed by the question paper setters in Foundation Course "Analytical Skills" for 4th Semester for all the second Degree students from the Academic year 2019-20.
3. Discussed and recommended that no changes are required in Syllabi, Model Question Papers and Guidelines to be followed by the question paper setters in Mathematics for 6th Semester and followed General Elective, Cluster Electives from the Academic year 2017-18 and followed same pattern for the Academic Year 2019 - 20. **Project work in VI Semester**
4. Discussed and recommended for organizing certificate course online/offline, 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. Singh
Chairman

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Accredited with "A" Grade by NAAC, Bengaluru

MATHEMATICS	MAT-201	I B.Sc	w.e.f 2019-20
SEMESTER-II	PAPER-II	Max.Marks:100	
Hours/Week: 6	<u>SOLID GEOMETRY</u>	No.of Credits: 5	

UNIT – I (10 hrs) : The Plane :

Equation of plane in terms of its intercepts on the axis, Equations of the plane through the given points, Length of the perpendicular from a given point to a given plane, Bisectors of angles between two planes, Combined equation of two planes, Orthogonal projection on a plane.

UNIT – II (12 hrs) : The Line :

Equation of a line; Angle between a line and a plane; The condition that a given line may lie in a given plane; The condition that two given lines are coplanar; Number of arbitrary constants in the equations of straight line; Sets of conditions which determine a line; The shortest distance between two lines; The length and equations of the line of shortest distance between two straight lines; Length of the perpendicular from a given point to a given line;

UNIT – III (12 hrs) : Sphere :

Definition and equation of the sphere; Equation of the sphere through four given points; Plane sections of a sphere; Intersection of two spheres; Equation of a circle; Sphere through a given circle; Intersection of a sphere and a line; Power of a point; Tangent plane; Plane of contact; Polar plane; Pole of a Plane; Conjugate points; Conjugate planes;

UNIT – IV (14 hrs) : Sphere & Cones :

Angle of intersection of two spheres; Conditions for two spheres to be orthogonal; Radical plane; Coaxial system of spheres; Simplified form of the equation of two spheres. Definitions of a cone; vertex; guiding curve; generators; Equation of the cone with a given vertex and guiding curve; Enveloping cone of a sphere; Equations of cones with vertex at origin are homogenous; Condition that the general equation of the second degree should represent a cone; Condition that a cone may have three mutually perpendicular generators;

UNIT – V (12 hrs) Cones & Cylinders :

Intersection of a line and a quadric cone; Tangent lines and tangent plane at a point; Condition that a plane may touch a cone; Reciprocal cones; Intersection of two cones with a common vertex; Right circular cone; Equation of the right circular cone with a given vertex; axis and semi-vertical angle. Definition of a cylinder; Equation to the cylinder whose generators intersect a given conic and are parallel to a given line; Enveloping cylinder of a sphere; The right circular cylinder; Equation of the right circular cylinder with a given axis and radius.

Reference Books :

1. Analytical Solid Geometry by Shanti Narayan and P.K. Mittal, Published by S. Chand & Company Ltd. 7th Edition.
2. A text book of Mathematics for BA/B.Sc Vol 1, by V Krishna Murthy & Others, Published by S. Chand & Company, New Delhi.
3. A text Book of Analytical Geometry of Three Dimensions, by P.K. Jain and Khaleel Ahmed, Published by Wiley Eastern Ltd., 1999.
4. Co-ordinate Geometry of two and three dimensions by P. Balasubrahmanyam, K.Y. Subrahmanyam, G.R. Venkataraman published by Tata-MC Gran-Hill Publishers Company Ltd., New Delhi.

Suggested Activities:

Seminar/ Quiz/ Assignments/ Project on Application of Solid Geometry in Engineering

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EXAMINATION AT THE END OF SECOND SEMESTER (w.e.f: 2016-17)

Mathematics Paper - II Mat - 201 C Max. Marks : 75 Pass Mark : 30 Time : 3 hrs.

SECTION - A (Short Answer Questions)

5 x 5 = 25 M

Answer any FIVE questions

- Find the equation of the plane through (4, 4, 0) and perpendicular to the planes $x+2y+2z=5$ and $3x+3y+2z-8=0$
- Find the equation to the plane through the line of intersection of $x-y+3z+5=0$ and $2x+y-2z+6=0$ and passing through (-3, 1, 1).
- Find the image of the point (1, 3, 4) in the plane $2x-y+z+3=0$.
- Find the equation to the plane containing the parallel lines $\frac{x-3}{4} = \frac{y-2}{-5} = \frac{z-4}{-1}$ and $\frac{x+2}{-4} = \frac{y}{5} = \frac{z-3}{1}$.
- Find the equation of the sphere through the points (0, 0, 0), (0, 1, -1), (-1, 2, 0), (1, 2, 3).
- Find the equation of the sphere for which the circle $x^2+y^2+z^2+7y-2z+2=0$, $2x+3y+4z=8$
- Find the equation to the cone which passes through the three co-ordinate axes and the lines $\frac{x}{1} = \frac{y}{-2} = \frac{z}{3}$ & $\frac{x}{2} = \frac{y}{1} = \frac{z}{1}$.
- Find the equation to the right circular cylinder of radius 2 whose axis passes through the point (1, 2, 3) and has direction ratios (2, -3, 6)

SECTION - B

Answer any FIVE questions

5 x 10 = 50 M

- Show that the equation $x^2+4y^2+9z^2-12yz-6zx+4xy+5x+10y-15z+6=0$ represents a pair of parallel planes and find the distance between them.
- Find the length and equation to the line of S. D between the lines $\frac{x-2}{3} = \frac{y-3}{4} = \frac{z-1}{2}$, $\frac{x-4}{4} = \frac{y-5}{5} = \frac{z-2}{3}$
- Find the equations of the spheres passing through the circle $x^2+y^2=4$, $z=0$ and is intersected by the plane $x+2y+2z=0$ in a circle of radius 3.

12. Find the limiting points of the coaxial system spheres $x^2+y^2+z^2-20x+30y-40z+29+\lambda(2x-3y+4z)=0$
13. Show that the two lines of intersection of the plane $ax+by+cz=0$ with the cone $yz+zx+xy=0$ will be perpendicular if $\frac{1}{a} + \frac{1}{b} + \frac{1}{c} = 0$
14. Show that the general equation to a cone which touches the three co-ordinate planes is $\sqrt{ax} + \sqrt{by} + \sqrt{cz} = 0$
15. Find the equation of the cylinder whose generators are parallel to the line $\frac{x}{1} = \frac{y}{-2} = \frac{z}{3}$ and whose base curve is $x^2+2y^2=1, z=3$.
16. Find the equation to the right circular cylinder whose guiding circle is $x^2+y^2+z^2=9, x-y+z=3$.

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DEPARTMENT OF MATHEMATICS

Question Paper Guidelines for SEMESTER-END Examinations

Time: 3 Hrs

MAT- 201

Max.Marks:70

Min. Marks: 28

Note :- 1) Answer any FOUR questions out of 8 in Section-A. Each question carries 4 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)	2	2	2	1	1
<u>Section-B</u> (Essay questions)	1	1	2	2	2

---The End---

MATHEMATICS	MAT-401	B.Sc(E.M,T.M, CCs& CS)	w.e.f 2019-2020
SEMESTER-IV		PAPER-IV	Max.Marks:100
Hours/ Week: 6			No.of Credits: 5

Abstract Algebra and Real Analysis – II

UNIT – 1 : (14 Hrs) HOMOMORPHISM : -

Definition of homomorphism – Image of homomorphism elementary properties of Homomorphism – Isomorphism – automorphism definitions and elementary properties– kernel of homomorphism – fundamental theorem on Homomorphism and applications.

UNIT – 2 : (12 Hrs) PERMUTATIONS AND CYCLIC GROUPS : -

Definition of permutation – permutation multiplication – Inverse of a permutation – cyclic permutations – transposition – even and odd permutations – Cayley’s theorem.

Cyclic Groups: -Definition of cyclic group – elementary properties – classification of cyclic groups.

UNIT – III (10 hrs) : LIMITS AND CONTINUITY :

Limits : Real valued Functions, Boundedness of a function, Limits of functions. Some extensions of the limit concept, Infinite Limits. Limits at infinity. **No. Question is to be set from this portion.**

Continuous functions: Continuous functions, Combinations of continuous functions, Continuous Functions on intervals, uniform continuity.

UNIT – IV (12 hrs) : DIFFERENTIATION AND MEAN VALUE THEOREMS :

The derivability of a function, on an interval, at a point, Derivability and continuity of a function, Graphical meaning of the Derivative, Mean value Theorems; Role’s Theorem, Lagrange’s Theorem, Cauchy’s Mean value Theorem

UNIT – V (12 hrs) : RIEMANN INTEGRATION :

Riemann Integral, Riemann integral functions, Darboux theorem. Necessary and sufficient condition for R – integrability, Properties of integrable functions, Fundamental theorem of integral calculus, integral as the limit of a sum, Mean value Theorems.

Reference Books :

1. Real Analysis by Rabert & Bartely and .D.R. Sherbart, Published by John Wiley.
2. A Text Book of B.Sc Mathematics by B.V.S.S. Sarma and others, Published by S. Chand & Company Pvt. Ltd., New Delhi.
3. Elements of Real Analysis as per UGC Syllabus by Shanthi Narayan and Dr. M.D. Raisingkania Published by S. Chand & Company Pvt. Ltd., 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 FOURTH SEMESTER (w.e.f 2019-20)

Mathematics Paper IV MAT- 401 Max. Marks: 70 Pass Mark: 28 Time: 3 hrs.

Abstract Algebra and Real Analysis – II

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. The set of all automorphisms of a group G forms a group w.r.to composition of mappings.
2. If $f = (1\ 2\ 3\ 4\ 5\ 8\ 7\ 6)$, $g = (4\ 1\ 5\ 6\ 7\ 3\ 2\ 8)$ are cyclic permutations, then show that $(fg)^{-1} = g^{-1}f^{-1}$.
3. Every sub group of a cyclic group is cyclic
4. Show that $f: \mathbb{R} \rightarrow \mathbb{R}$ is defined by $f(x) = 1$ if $x \in \mathbb{Q}$ and $f(x) = -1$ if $x \in \mathbb{R} - \mathbb{Q}$ is discontinuous for all $x \in \mathbb{R}$

Part - II

5. Show that $f(x) = |x| + |x - 1|$ is continuous at $x=0,1$ but not derivable at $x=0,1$.
6. Using Lagrange's Mean value Theorem show that $x > \log(1+x) > \frac{x}{1+x}$ if $f(x) = \log(1+x)$, $x > 0$
7. If $f(x) = x^2$ on $[0, 1]$ and $P = \{0, 1/4, 2/4, 3/4, 1\}$ find $U(p, f)$ and $L(p, f)$
8. Show that $\lim_{n \rightarrow \infty} \sum_{r=1}^n \frac{n}{n^2+r^2} = \frac{\pi}{4}$

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 Fundamental theorem of group homomorphism.
10. If $f: G \rightarrow G^1$ is a group homomorphism, then show that “Ker f ” is a normal subgroup of G .

11. State and prove Cayley's theorem for permutation groups.

12. If $f: [a, b] \rightarrow \mathbb{R}$ is continuous on $[a, b]$ then f is bounded on $[a, b]$

Part - II

13. State and prove Rolle's Theorem

14. Find c of Cauchy's Mean value Theorem for $f(x)=\sqrt{x}$; $g(x)=\frac{1}{\sqrt{x}}$ in $[a, b]$ where $0 < a < b$

15. State and prove Fundamental Theorem of Integral calculus

16. Prove that $\frac{1}{\pi} \leq \int_0^1 \frac{\sin \pi x}{1+x^2} dx \leq \frac{2}{\pi}$ by First mean value theorem in integral calculus.

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DEPARTMENT OF MATHEMATICS

Question Paper Guidelines for SEMESTER-END Examinations

Time: 3 Hrs MAT- 401 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:

	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)	2	1	1	2	2

---The End---

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MATHEMATICS	MAT-601GE	w.e.f.2019-20	III B.Sc
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SEMESTER-VI	PAPER-VII	Max.Marks:70
Hours/ Week: 5		No.of Credits: 5

ELECTIVE-VII-(B); NUMERICAL ANALYSIS

UNIT- I:	10 hours
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Errors in Numerical computations: Errors and their Accuracy, Mathematical Preliminaries, Errors and their Analysis, Absolute, Relative and Percentage Errors, A general error formula, Error in a series approximation.

UNIT – II:	12 hours
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Solution of Algebraic and Transcendental Equations: The bisection method, the iteration method, the method of false position, Newton Raphson method, Generalized Newton Raphson method.

UNIT – III:	12 hours
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Finite Differences and Interpolation: Errors in polynomial interpolation, Finite Differences, Forward differences, Backward differences, Symbolic relations, Detection of errors by use of Differences Tables, Differences of a polynomial, Newton’s formulae for interpolation

UNIT – IV:	12 hours
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Central Differences: Central Differences, Central Difference Interpolation Formulae, Gauss’s central difference formulae, Stirling’s central difference formula, Bessel’s Formula, Everett’s Formula.

UNIT – V:	14 hours
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Interpolation – III:

Interpolation with unevenly spaced points, Lagrange’s formula, Error in Lagrange’s formula, Divided differences and their properties, Relation between divided differences and forward differences, Relation between divided differences and backward differences Relation between divided differences and central differences, Newton’s general interpolation Formula, Inverse interpolation.

Reference Books:

1. Numerical Analysis by S.S.Sastry, published by Prentice Hall of India Pvt. Ltd., New Delhi. (Latest Edition)
2. Numerical Analysis by G. SankarRao published by New Age International Publishers, New – Hyderabad.
3. Finite Differences and Numerical Analysis by H.C Saxena published by S. Chand and Company, Pvt. Ltd., New Delhi.
4. Numerical methods for scientific and engineering computation by M.K.Jain, S.R.K.Iyengar, R.K. Jain.

Suggested Activities:

Seminar/ Quiz/ Assignments

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VUYYURU – 521165, KRISHNA Dt., A.P.
(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)
Accredited with “A” Grade by NAAC, Bengaluru
EXAMINATION AT THE END OF SIXTH SEMESTER (w.e.f 2019-20)

MATHEMATICS Paper VII MAT- 601GE MAX.MARKS: 70 TIME: 3 hrs

ELECTIVE–VII-(B):NUMERICAL 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. Evaluate the sum $S = \sqrt{3} + \sqrt{5} + \sqrt{7}$ to four significant digits and find its absolute and relative errors.
2. Find the real root of the equation $x^3 + x - 1 = 0$ by Iteration method, given that the root lies near 1
3. Find the real root of the equation $x \log_{10} x = 1.2$ by Newton – Raphson method
4. Prove that $e^x = \left(\frac{\Delta^2}{E}\right) e^x \frac{Ee^x}{\Delta^2 e^x}$ the interval of differencing being unity.

PART - II

5. If $u_0 = 3, u_1 = 12, u_2 = 81, u_3 = 200, u_4 = 100, u_5 = 8$ find the value of $\Delta^5 u_0$
6. Prove that i) $\mu^2 = 1 + \frac{1}{4} \delta^2$ ii) $\Delta = \frac{1}{2} \delta^2 + \delta \sqrt{1 + \frac{1}{4} \delta^2}$
7. Apply Gauss’s Forward formula to find the value of u_9 if $u_0 = 14, u_4 = 24, u_8 = 32, u_{12} = 35, u_{16} = 40$
8. Find the third divided difference for the function $f(x) = x^3 + x + 2$ for the arguments 1, 3, 6, 11

Section – B (long answer questions)

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

5x10 = 50M

Choosing at least **TWO** question from each Part.

PART - I

9. If $U = 5xy^2 / z^3$ then find relative maximum error in U, given that $\Delta x = \Delta y = \Delta z = 0.001$ and $x = y = z = 1$
10. Find the real root of the equation $x^2 - 4x - 10 = 0$ by bisection method.
11. Find the real root of the equation $x^3 - 2x - 5 = 0$ by Regula – Falsi method.
12. State and prove Newton’s Gregory forward interpolation formula

PART - II

13. The following table gives the marks obtained by 100 students in Mathematics in a certain examination

Marks obtained:	30-40	40-50	50-60	60-70	70-80
No.of Students:	25	35	22	11	7

How many students got more than 55 marks.

14. The population of town is as follows. Find the population for the year 1956 by Gauss's Backward formula from the following table

Year	:	1931	1941	1951	1961	1971
Population	:	15	20	27	39	52
(in thousand)						

15. State and prove Stirling's formula
16. State and prove Newton's Divided difference formula

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MATHEMATICS	MAT-602CE	w.e.f.2019-20	III B.Sc
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SEMESTER-VI

PAPER-VIII

Max.Marks:70

Hours/ Week: 5

No.of Credits: 5

Cluster Elective- VIII-A-1: INTEGRAL TRANSFORMS

UNIT-1:Application of Laplace Transform to solutions of Differential Equations 12 hrs

Solutions of ordinary Differential Equations. Solutions of Differential Equations with constants co-efficient Solutions of Differential Equations with Variable co-efficient

UNIT – 2:Application of Laplace Transform : - 12 hrs

Solution of simultaneous ordinary Differential Equations.Solutions of partial Differential Equations.

UNIT – 3:Application of Laplace Transforms to Integral Equations : - 12 hrs

Integral Equations-Abel's, Integral Equation-Integral Equation of Convolution Type, Integro Differential Equations. Application of L.T. to Integral Equations.

UNIT –4: Fourier Transforms-I : - 12 hrs

Definition of Fourier Transform – Fourier's sine Transform – Fourier cosine Transform – Linear Property of Fourier Transform – Change of Scale Property for Fourier Transform – sine Transform and cosine transform shifting property – modulation theorem.

UNIT – 5: Fourier Transform-II : - 12 hrs

Convolution Definition – Convolution Theorem for Fourier transform – parseval's Identify Relationship between Fourier and Laplace transforms – problems related to Integral Equations.

Finte Fourier Transforms : -

Finte Fourier Sine Transform – Finte Fourier Cosine Transform – Inversion formula for sine and cosine Transforms only statement and related problems.

Reference Books :-

1. Integral Transforms by A.R. Vasistha and Dr. R.K. Gupta Published by Krishna Prakashan Media Pvt. Ltd. Meerut.
2. A Course of Mathematical Analysis by ShanthiNarayana and P.K. Mittal, Published by S. Chand and Company pvt. Ltd., New Delhi.
3. Fourier Series and Integral Transforms by Dr. S. Sreenadh Published by S.Chand and Company Pvt. Ltd., New Delhi.
4. Lapalce and Fourier Transforms by Dr. J.K. Goyal and K.P. Gupta, Published by Pragathi Prakashan, Meerut.
5. Integral Transforms by M.D. Raising hania, - H.C. Saxsena and H.K. Dass Published by S.Chand and Company pvt. Ltd., New Delhi.

Suggested Activities:

Seminar/ Quiz/ Assignments

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MATHEMATICS	MAT-603CE	w.e.f.2019-20	III B.Sc
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SEMESTER-VI	PAPER-VIII	Max.Marks:70
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Hours/ Week: 5	No.of Credits: 5
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ELECTIVE – VIII-A-2: ADVANCED NUMERICAL ANALYSIS

Unit – I Curve Fitting: 10 Hours

Least – Squares curve fitting procedures, fitting a straight line, Polynomial fitting, Curve fitting by a power functions and exponential function.

UNIT- II Numerical Differentiation: 12 hours

Derivatives using Newton's forward difference formula, Newton's backward difference formula, Derivatives using central difference formula, Stirling's interpolation formula, Newton's divided difference formula, Maximum and minimum values of a tabulated function.

UNIT- III Numerical Integration: 12 hours

General quadrature formula, Trapezoidal rule, Simpson's 1/3 – rule, Simpson's 3/8 – rule, Boole's rule and Weddle's rules (only problems),

UNIT – IV Solutions of simultaneous Linear Systems of Equations: 14 hours

Solution of linear systems – Direct methods, Matrix inversion method, Gaussian elimination methods, Gauss-Jordan Method, Method of factorization. Iterative methods – Jacobi's method, Gauss-Seidel method.

UNIT – V Numerical solution of ordinary differential equations: 12 Hours

Introduction, Solution by Taylor's Series, Picard's method of successive approximations, Euler's method, Modified Euler's method, Runge – Kutta methods.

Reference Books :

1. Numerical Analysis by S.S.Sastry, published by Prentice Hall India (Latest Edition).
2. Numerical Analysis by G. SankarRao, published by New Age International Publishers, Hyderabad.
3. Finite Differences and Numerical Analysis by H.C Saxena published by S. Chand and Company, Pvt. Ltd., New Delhi.
4. Numerical methods for scientific and engineering computation by M.K.Jain, S.R.K.Iyengar, R.K. Jain.

Suggested Activities:

Seminar/ Quiz/ Assignments

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MATHEMATICS	MAT-604CE	w.e.f.2019-20	III B.Sc
SEMESTER-VI	PAPER-VIII		Max.Marks:70
Hours/ Week: 5		No.of Credits: 5	

ELECTIVE – VIII-A-3: Project

Applications of advanced Numerical Analysis with 'C' Programme

EXAMINATION AT THE END OF SIXTH SEMESTER (w.e.f 2019-20)

MATHEMATICS Paper VIII MAT-602CE MAX.MARKS: 70 TIME: 3 hrs

Cluster Elective- VIII-A-1: INTEGRAL TRANSFORMS

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. Solve $(D^2 - 2D + 2)y = 0$, $y = Dy = 1$, when $t = 0$.
2. Solve $(D^2 - 3D + 2)y = 1 - e^{2t}$, if $y = 1$, $Dy = 0$, when $t = 0$.
3. Solve $(D - 2)x + 3y = 0$, $2x + (D - 1)y = 0$ if $x(0) = 8$ and $y(0) = 3$.
4. Solve $\frac{\partial y}{\partial x} = 2\frac{\partial y}{\partial t} + y$, $y(x, 0) = 6e^{-3x}$ which is bounded for $x > 0$, $t > 0$.

PART – II

5. Convert $y''(t) - 3y'(t) + 2y(t) = 4 \sin t$, $y(0) = 1$, $y'(0) = -2$ into integral equation.
6. Solve the integral equation $F(t) = t + 2\int_0^t \cos(t - u) F(u) du$.
7. Find the Fourier sine and cosine transform of $f(x) = x$
8. Show that $\int_0^\infty \frac{\cos \lambda x}{\lambda^2 + 1} d\lambda = \frac{\pi}{2} e^{-x}$, $x \geq 0$.

Section – B (long answer questions)

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

5x10 = 50M

Choosing at least **TWO** question from each Part.

PART – I

9. Solve $(D + 1)^2 = t$, given that $y = -3$, when $t = 0$ and $y = -1$ when $t = 1$.
10. Solve $y'' - t y' + y = 1$ if $y(0) = 1$, $y'(0) = 2$.
11. Solve $(D^2 - 3)x - 4y = 0$, $x + (D^2 + 1)y = 0$, $t > 0$ if $x = y = Dy = 0$, $Dx = 2$.
12. Solve $\frac{\partial y}{\partial t} = \frac{\partial^2 y}{\partial x^2}$, $y(\frac{\pi}{2}, t) = 0$, $(\frac{\partial y}{\partial x})_{x=0} = 0$ and $y(x, 0) = \cos 3x$.

PART – II

13. Solve the integral equation $F(t) = 1 + \int_0^t F(u) \sin(t - u) du$ and verify your solution.

14. Solve the integral equation $\int_0^t \frac{F(u) du}{\sqrt{(t-u)}} = 1 + t + t^2$.

15. Find the Fourier transform of $f(x)$ defined by $f(x) = \begin{cases} 1, & |x| < a \\ 0, & |x| > a \end{cases}$ and hence evaluate

$$i \int_{-\infty}^{\infty} \frac{\sin pa \cos px}{p} dp \text{ ii) } \int_0^{\infty} \frac{\sin p}{p} dp.$$

16. Find the finite Fourier sine and cosine transforms of the function $f(x) = 2x, 0 < x < 4$.

**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)
Accredited with “A” Grade by NAAC, Bengaluru

EXAMINATION AT THE END OF SIXTH SEMESTER (w.e.f 2019-20)

MATHEMATICS Paper VIII MAT-603CE MAX.MARKS: 70 TIME: 3 hrs

Cluster Elective VIII-A-2: ADVANCED NUMERICAL 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. Find the least square line $y = a + bx$ for the data

Xi: -2 -1 0 1 2

Yi: 1 2 3 3 4

2. Find $f^{-1}(5)$ from the following table

x: 1 2 4 8 10

f(x): 0 1 5 21 27

3. Evaluate $\int_0^1 \frac{1}{1+x^2} dx$ by Trapezoidal rule

4. Evaluate $\int_0^4 e^x dx$ by Simpson's $\frac{1}{3}$ rule

PART – II

5. Solve $3x + y + 2z = 3$, $2x - 3y - z = -3$, $x + 2y + z = 4$ by Matrix inversion method

6. Solve $x + y + z = 9$, $2x + 5y + 7z = 52$, $2x + y - z = 0$ by Cramer's rule

7. Given D.E is $\frac{dy}{dx} = 1 + xy$ with $y = 1$ when $x = 0$ compute $y(0.1)$

8. Solve the equation $y' = -y$ with $y(0) = 1$ for $x = 0.04$ in four steps

Section – B (long answer questions)

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

5x10 = 50M

Choosing at least **TWO** question from each Part.

PART – I

9. Find the least square power function of the form $y = ax^b$ for the data
- X_i : 1 2 3 4
 Y_i : 3 12 21 35
10. Using the given table find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ at $x = 1.2$
- x : 1.0 1.2 1.4 1.6 1.8 2.0 2.2
 y : 2.7183 3.3201 4.0552 4.9530 6.0496 7.3891 9.0250
11. Find the value of $\int_0^1 \frac{1}{1+x^2} dx$ by using Simpson's 3/8 rule and hence find the value of " π "
12. Evaluate $\int_4^{5.2} \log x dx$ by using Weddle's rule.

PART – II

13. Solve $2x + y + z = 10$, $3x + 2y + 3z = 18$, $x + 4y + 9z = 16$ by Gauss elimination method
14. Solve $3x + 2y + 4z = 7$, $2x + y + z = 7$, $x + 3y + 5z = 2$ by Factorization method
15. Solve the D.E $\frac{dy}{dx} = 1 + y^2$, $y(0) = 0$ by Picard's method
16. Given $\frac{dy}{dx} = y - x$ with $y(0) = 2$ find $y(0.1)$ and $y(0.2)$ correct to four decimal places by RK method.

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**(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam)
EXAMINATION AT THE END OF SIXTH SEMESTER (w.e.f 2019-20)**

MATHEMATICS Paper VIII MAT-604CE MAX.MARKS: 70 TIME: 3 hrs

Cluster Elective- VIII-A-3: PROJECT

Applications of advanced Numerical Analysis with 'C' Programme

DEPARTMENT OF MATHEMATICS

Guidelines of III B.Sc for Question Paper Setters VI Semester-End Exams: 2019-20

Time: 3 Hrs **Elective.MAT- 601GE** Max.Marks:70

Paper Title : Numerical analysis

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	2	2	1
<u>Section-B</u> (Essay Questions)	1	2	2	2	1

-The End -

DEPARTMENT OF MATHEMATICS

Guidelines of III B.Sc for Question Paper Setters VI Semester-End Exams: 2019-20

Time: 3 Hrs **Cluster.MAT- 602CE**

Max.Marks:70

Paper Title: Integral Transforms

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)	2	2	2	1	1
<u>Section-B</u> (Essay Questions)	2	2	2	1	1

-The End -

DEPARTMENT OF MATHEMATICS

Guidelines of III B.Sc for Question Paper Setters VI Semester-End Exams: 2019-20

Time: 3 Hrs **Cluster.MAT- 603CE**

Max.Marks:70

Paper Title: Advanced Numerical Analysis

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	1	2	2	2
<u>Section-B</u> (Essay Questions)	1	1	2	2	2

-The End -

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

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

Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF PHYSICS

MINUTES OF BOARD OF STUDIES

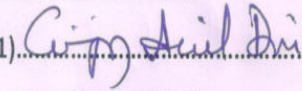
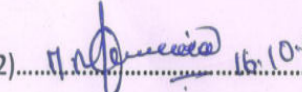
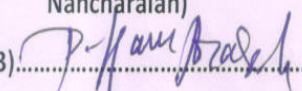
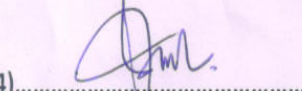
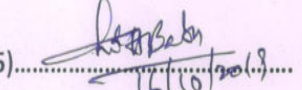
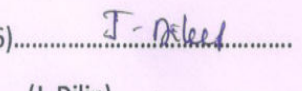
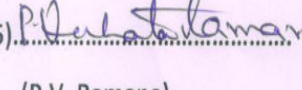

EVEN SEMESTER

16-10-2019

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 16-10-2019 in the Department of Physics.

Sri Ch. Vijay Anil Dai Presiding

Members Present:

- 1)  Chairman
(Ch. Vijay Anil Dai) Head, Department of Physics
A.G. & S.G.S. Degree College of Arts & Science, Vuyyuru - 521165.
- 2)  University Nominee
(Dr. M. Rama Krishna) Lecturer in Physics,
Nancharaiah) The Hindu College,
Machilipatnam.
- 3)  Academic Council
(Dr. P. Syam Prasad) Nominee Asst. Professor,
Dept. of Physics, NIT,
Warangal.
- 4)  Academic Council
(Dr. K. Suresh) Nominee Lecturer in Physics,
VSR & NVR College for Arts & Sciences
Tenali.
- 5)  Representative from
(I. Chittibabu) Industry Sub Divisional Engineer, BSNL,
Vijayawada.
- 6)  Alumni
(J. Dilip) Lecturer in Physics,
Srinivasa College, Gannavaram.
- 5)  Member
(P.V. Ramana) Lecturer in Physics,
A.G. & S.G.S. Degree College of Arts & Science, Vuyyuru - 521165.
- 6)  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 II semester of I Degree B.Sc., Physics for the Academic year 2019-2020.
2. To recommend the syllabi and model papers for IV semester of II Degree B.Sc., Physics for the Academic year 2019-2020.
3. To recommend the syllabi and model papers for VI semester of III Degree B.Sc. Physics for the Academic year 2019-2020.
4. To recommend the Blue print of question papers for II, IV & VI semesters of B.Sc. Physics for the Academic year 2019-2020.
5. To recommend the Guidelines to be followed by the question paper setters in Physics for II, IV & VI 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, Vuyuru.
9. Any other matter.


Chairman.

RESOLUTIONS

- 1) It is resolved to continue the same **syllabi and model papers for II semester of I B.Sc.** under Choice Based Credit System (CBCS) for the Academic year 2019-20 also.
- 2) It is resolved to follow the **changed syllabi and model papers for IV semester of II B.Sc.** under Choice Based Credit System (CBCS) for the Academic year 2019-20.
- 3) It is resolved to follow
 - a) The same **syllabi and model papers** for elective paper “Analog and Digital Electronics” (PHY-601GE) under Choice Based Credit System (CBCS) for **VI semester of III B.Sc.**
 - b) The **changed syllabi and model papers** for Cluster paper “Introduction to Microprocessor and Microcontroller” (PHY-602 CE) under Choice Based Credit System (CBCS) for **VI semester of III B.Sc. small change in unit-III**
 - c) The same **syllabi and model papers** for Cluster paper “Computational Methods and Programming” (PHY-603 CE) under Choice Based Credit System (CBCS) for **VI semester of III B.Sc.**
 - d) The **changed syllabi and model papers** for Cluster paper “Electronics Instrumentation” (PHY-604 CE) under Choice Based Credit System (CBCS) for **VI semester of III B.Sc.**
- 4) It is resolved to follow the **changed Blue print of IV semester of Degree II B.Sc.** for the Academic year 2019-20.
 - It is resolved to continue the same **Blue print** of II semester of Degree B.Sc. for the Academic year 2019-20 also.
 - It is resolved to follow the **changed Blue print of VI semester of Degree III B.Sc.** for the Academic year 2019-20.

- 5) It is resolved to follow the changed Guidelines of IV semester of Degree II B.Sc. for the Academic year 2019-20.
 - It is resolved to continue the same **Guidelines** of II semester of I Degree B.Sc. for the Academic year 2019-20.
 - It is resolved to follow the changed Guidelines of VI semester of Degree III B.Sc. for the Academic year 2019-20.
- 6) It is resolved to continue the following teaching and evolution methods for Academic year 2019-20.

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 II) and II B.SC.(sem IV) 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 II and IV Semesters.**
- For III B.Sc (i.e. **VI semester**) out of 100 marks in each paper, 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.**

➤ **Semester – End Examination:**

- The maximum marks for I B.Sc and II B.Sc. Semester – End examination shall be 70 marks and duration of the examination shall be 3 hours.
 - 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** in theory papers and **practical Examinations** shall be conducted at the end of every semester **II, IV & VI for I, II & III B.Sc.**
- 7) Discussed and recommended for organizing **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 Physics to suggest the panel of paper setters and examiners to the controller of examinations.
 - 9) Nil.

C. S. S. S. S.
Chairman.

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

(AUTONOMOUS), VUYYURU – 521 165

I B.Sc. 2nd Semester (2019-2020)

Paper II: Waves & Oscillations II SEMESTER

Work load: 60 hrs per semester credits - 3

4 hrs/week

UNIT- I

1. Simple Harmonic oscillations :12 hrs

Simple harmonic oscillator and solution of the differential equation-Physical characteristics of SHM, torsion pendulum-measurements of rigidity modulus, compound pendulum-measurement of 'g', combination of two mutually perpendicular simple harmonic vibrations of same frequency and different frequencies. Lissajous figures.

UNIT- II

2. Damped and forced oscillations :12 hrs

Damped harmonic oscillator, solution of the differential equation of damped oscillator. Energy considerations, comparison with un-damped harmonic oscillator, logarithmic decrement, relaxation time, quality factor, differential equation of forced oscillator and its solution, amplitude resonance and velocity resonance.

UNIT- III

3. Complex vibrations : 10 hrs

Fourier theorem and evaluation of the Fourier coefficients, analysis of periodic wave functions-square wave, triangular wave, saw tooth wave

UNIT -IV

4. Vibrating strings :8 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, energy transport and transverse impedance.

5. Vibrations of bars :9 hrs

Longitudinal vibrations in bars-wave equation and its general solution. Special cases i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar fixed at one end. Tuning fork.

UNIT- V

6. Ultrasonics :9 hrs

Ultrasonics, properties of ultrasonic waves, production of ultrasonics by piezoelectric and magnetostriction methods, detection of ultrasonics, determination of wavelength of ultrasonic waves. Applications of ultrasonic waves.

Reference Books:

1. BSc Physics -Telugu Akademy, Hyderabad
2. First Year Physics - *Telugu Academy*.
3. Fundamentals of Physics. Halliday/Resnick/Walker ,*Wiley India Edition 2007*.
4. Waves and Oscillations. S. Badami, V. Balasubramanian and K. Rama Reddy *Orient Longman*.
5. Mechanics of Particles, Waves and Oscillations. Anwar Kamal, *New Age International*.
6. College Physics-I. T. Bhimasankaram and G. Prasad. *Himalaya Publishing House*.
7. Introduction to Physics for Scientists and Engineers. F.J. Ruche. *McGraw Hill*.
8. Waves and Oscillations. N. Subramaniam and Brijlal *Vikas Publishing House Private Limited*.
9. Unified Physics Vol.I Mechanics, Waves and Oscillations – *Jai Prakash Nath &co*.
10. Science and Technology of Ultrasonics- Bladevraj, *Narosa, New Delhi,2004*

The Guidelines to be followed by the question paper setters in Physics for the Second semester - end exams (2019-20)

PAPER TITLE: Waves & Oscillations

Paper- II Semester – II Maximum marks: 70marks 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(30 Marks)	T+P	2
Unit-3(15 Marks)	T	1
Unit-4(20 Marks)	T+P	1
Unit-5(25 Marks)	T	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.

II	SEMESTER –	COURSE CODE : PHY-201 C
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PAPER TITLE : Waves and Oscillations

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS),VUYYURU**

Duration : 3Hours Maximum marks : 70marks Pass marks : 28 marks

SECTION-A

Answer any FOUR of the following

4x5=20m

1. write any five application of ultrasonic.
2. Explain fundamental frequency, overtone and harmonics
3. Write the physical characteristics of simple harmonic oscillator
4. Explain amplitude resonance
5. State and prove fourier theorem.
6. A steel wire of length 150cm has 5gm mass it is stretched with a tension of 200n the velocity of transverse wave travelling in the wire
7. Calculate the fundamental frequency of a quartz crystal of thickness 0.001m. Given $y=7.9 \times 10^{10} \text{ n/m}^2$ $p=2650 \text{ kg/m}^3$
8. The Q-factor of an oscillator is 500. Find its initial energy, if its amplitude is 0.01m. Also calculate the energy lost in first cycle. Given $S=m\omega^2= 100 \text{ n/m}$

SECTION-B

Answer any FIVE of the following

5x10=50m

9. What is the simple harmonic oscillator? Derive equation of motion of the simple harmonic oscillator and its solution.
10. Derive the equation for the combination of two mutually perpendicular simple harmonic vibration of equal frequency.
11. What is damped oscillator? Derive the expression for energy of a damped oscillator.
12. What is forced oscillation? Derive the differential equation of forced oscillation. Obtain its solution
13. Deduce the frequencies longitudinal vibration of a bar clamped at both ends.
14. State Fourier's theorem and use it to analysis of a square wave.
15. Explain the production of ultrasonic by magnetostriction method
16. Describe the how ultrasonic waves are produced by piezo electric effect.

Practical Paper 2: Waves & Oscillations

Exam duration : 3Hours credits - 2 Maximum marks : 50 marks

Work load: 30 hrs per semester

2 Hours per week

Minimum of 6 experiments to be done and recorded.

1. Determination of 'g' by compound/bar pendulum
2. Simple pendulum normal distribution of errors-estimation of time period and the error of the mean by statistical analysis
3. Determination of the force constant by static and dynamic method and evaluation of 'g'.
4. Determination of the elastic constants of the material of a flat spiral spring.
5. Determination of moment of inertia of a cylindrical rod -bifilar suspension
6. Coupled oscillators
7. Verification of laws of vibrations of stretched string –sonometer
8. Determination of velocity of transverse wave along a stretched string-sonometer
9. Determination of frequency of a bar –Melde's experiment.
10. Study of a damped oscillation using the torsional pendulum immersed in liquid-decay constant and damping correction of the amplitude.
11. Searls viscometer
12. Lissajous figures-CRO

DEPARTMENT OF PHYSICS
A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE

(AUTONOMOUS) , VUYYURU – 521 165
II B.Sc. 4th Semester (2019-2020)

Paper IV: Thermodynamics & Radiation Physics

Work load:60 hrs per semester

credits - 3

4 hrs/week

UNIT- I .. (11 hrs)

1.Kinetic theory of gases

Introduction –Deduction of Maxwell’s law of distribution of molecular speeds, Transport phenomena-Viscosity of gases-thermal conductivity-diffusion of gases.

UNIT- II ..(14 hrs)

2. Thermodynamics

Introduction- Isothermal and adiabatic process- Reversible and irreversible processes- Carnot’s engine and its efficiency-Carnot’s theorem-Second law of thermodynamics. Kelvin’s and Clausius statements-Entropy, physical significance –Change in entropy in reversible and irreversible processes-Entropy and disorder-Entropy of Universe- Temperature-Entropy (T-S) diagram-Change of entropy of a perfect gas- change of entropy when ice changes into steam.

UNIT- III ..(11 hrs)

3. Thermodynamic potentials and Maxwell’s equations

Thermodynamic potentials-Derivation of Maxwell’s thermodynamic relations-Clausius-Clayperon’s equation-Derivation for ratio of specific heats-Derivation for difference of two specific heats for perfect gas. Joule Kelvin effect-expression for Joule Kelvin coefficient for perfect.

UNIT- IV ..(10 hrs)

4. Low temperature Physics

Introduction-Joule Kelvin effect-liquefaction of gas using porous plug experiment Joule expansion-Distinction between adiabatic and Joule Thomson expansion-Expression for Joule Thomson cooling-Liquefaction of helium, Kapitza’s method-Adiabatic demagnetization, Production of low temperatures -applications of substances at low-temperature-effects of chloro and fluoro carbons on ozone layer.

UNIT- V ..(14 hrs)

5. Quantum theory of radiation

Blackbody-Ferry’s black body-distribution of energy in the spectrum of black body-Wein’s displacement law, Wein’s law, Rayleigh-Jean’s law-Quantum theory of radiation-Planck’s law-Measurement of radiation-Types of pyrometers –Angstrom pyroheliometer-determination of solar constant, Temperature of Sun.

TEXT BOOKS:

1. BSc Physics, Vol.2, *Telugu Akademy, Hyderabad*
2. Thermodynamics, R.C. Srivastava, Subit K. Saha&Abhay K. Jain *Eastern Economy Edition.*

3. Unified Physics Vol.2, Optics & Thermodynamics, *Jai Prakash Nath&Co.Ltd., Meerut*
4. Second Year Physics, K. Ramakrishna, D.V. Brahmaji, A. Sreenivasa Rao & S.L.V. Mallikarjun, Vikas Publications, Guntur.

REFERENCE BOOKS:

1. Fundamentals of Physics. Halliday/Resnick/Walker. *C. Wiley India Edition 2007*
2. Heat, Thermodynamics and Statistical Physics-N Brij Lal, P Subrahmanyam, PS Hemne, *S.Chand & Co., 2012*
3. Heat and Thermodynamics- MS Yadav, *Anmol Publications Pvt. Ltd, 2000*
4. University Physics, HD Young, MW Zemansky, FW Sears, *Narosa Publishers, New Delhi*
5. Text Book of +3 Physics – Samal, Mishra & Mohanty, National Library, Min. of Culture, Govt of India.
6. Modern Engineering Physics, A.S. Vasudeva, *S.Chand & Co.,*

The Guidelines to be followed by the question paper setters in Physics for the IV Semester - end exams

PAPER TITLE: Thermodynamics & Radiation Physics

Paper- IV Semester – IV Maximum marks: 70 marks Duration: 3Hours

Weightage for the question paper

Syllabus	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1(15 Marks)	T	1
Unit-2(30 Marks)	T+P	2
Unit-3(20 Marks)	T+P	2
Unit-4(25 Marks)	T	2
Unit-5(30 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 5, 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 – IV	COURSE CODE:PHY401C
PAPER TITLE : THERMODYNAMICS AND RADIATION PHYSICS	

Duration : 3Hours

Maximum marks : 70

Pass marks : 28

MODEL PAPER

**A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS), VUYYURU – 521 165**

II B.Sc. (PHYSICS)- IV SEMESTER

THERMODYNAMICS AND RADIATION PHYSICS

TIME: 3 Hrs

PHY – 401 C

MAX MARKS: 70

SECTION – A

ANSWER ANY FIVE OF THE FOLLOWING

(5 X 4 = 20 M)

- 1) Explain about Transport phenomena of gases
- 2) Explain about reversible and irreversible processes
- 3) Deduce Clausius – Clapeyron’s equation using Maxwell’s relations
- 4) Discuss the effects of chloro fluoro carbons on ozone layer
- 5) Define black body. Explain about ferrys black body
- 6) Calculate the efficiency of a reversible carnots engine that operates between 327 degrees centigrade and 127 degrees centigrade.
- 7) Deduce the change in the boiling point of water when the pressure changes by 1 cm of mercury. Given $L = 22.68 \times 10^5$ J/kg, volume of the 1kg of water = 10^{-3} and volume of 1 kg of steam = 1.674 m³.
- 8) A star emits radiations of maximum energy at a wavelength of 5500 Å. Find the temperature of the star. (Wien's constant = 0.289 cm-K)

SECTION – B

ANSWER ANY FIVE OF THE FOLLOWING QUESTIONS

(5 X 10 = 50 M)

- 9) Derive Maxwell’s law of distribution of molecular speeds
- 10) Derive the construction and working of Carnot’s heat engine. Derive an expression for its efficiency
- 11) Distinguish between isothermal and adiabatic processes. Derive the formula for the work done during adiabatic process.
- 12) Define the four thermodynamic potentials. Obtain Maxwells thermodynamic equations using these equations.
- 13) Define molar specific heats. Derive the specific heat relations from Maxwell’s thermodynamic relations.
- 14) What is Joule-Kelvin effect? Derive an expression for the cooling produced when a real gas suffers Joule-Thomson effect.
- 15) Explain the method of adiabatic demagnetization for producing low temperatures
- 16) What is a pyrometer? Describe the construction and working of Disappearing filament optical pyrometer

Practical Paper IV: Thermodynamics

Exam duration : 3Hours credits - 2 Maximum marks : 50 marks

Work load: 30 hrs

2 Hours per week

Minimum of 6 experiments to be done and recorded

1. Specific heat of a liquid –Joule’s calorimeter –Barton’s radiation correction
2. Thermal conductivity of bad conductor-Lee’s method
3. Thermal conductivity of rubber.
4. Measurement of Stefan’s constant.
5. Specific heat of a liquid by applying Newton’s law of cooling correction.
6. Heating efficiency of electrical kettle with varying voltages.
7. Mechanical equivalent of heat
8. Thermo emf - thermo couple potentiometer
9. Coefficient of thermal conductivity of copper- Searle’s apparatus.
10. Thermal behavior of an electric bulb (filament/torch light bulb)
11. Measurement of Stefan’s constant- emissive method
12. Temperature variation of resistance- thermistor.

DEPARTMENT OF PHYSICS
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III B.Sc. Physics – VI Semester – Paper –VII (2019 – 20)

Elective VII (A):(Electronics)

Course Code: PHY – 601GE

SEMISTER-VI

credits - 3

4 hrs/week

ELECTIVE PAPER –VII-A: ANALOG AND DIGITAL ELECTRONICS

UNIT- I (14 hours)

Total Lectures: 60 hours

1. FET Construction ,Working ,Characteristics and uses; MOSEFT-enhancement MOSEFT,Depletion MOSEFT, Construction and Working, drain Characteristics of MOSEFT, applications of MOSEFT.
2. Photo electric devices: structure and operation, Characteristics and applications of LED and LCD.

UNIT- II (10hours)

3. Operational amplifier: Characteristics of ideal and practical OP-amp (IC-741),Basic differential OP-amp supply voltage, IC identification, internal blocks of OP-amp, its parameter off set voltages and currents, CMRR, slew rate, Concept of Virtual ground.

UNIT- III (10hours)

4. Applications of OP-amp: OP-amp as voltage amplifier, inverting amplifier, Non- inverting amplifier, Voltage follower, summing amplifier, difference amplifier, comparator, Integrator, Differentiator.

UNIT- IV (14hours)

5. Data processing circuits: Multiplexers, De –Multiplexers, encoders, decoders, Characteristics

6.For Digital IC's –RTL, DTL,TTL, ECL CMOS (NAND&NOR Gates).

UNIT- V (12hours)

7. Sequential digital circuits: Flip-flops, RS, clocked SR, JK, D, T, Master-Slave Flip-flops .
8. Counters: Asynchronous counters-modulo 4counter-modulo 16 ripple counter, Decade counter, Synchronous counter.

REFERENCE BOOKS :

1. Digital Electronics by G.K.Kharate Oxford University Press.
2. Unified Electronics by Agarwal and Agarwal.

3. OP-Amp and Linear ICs by Ramakanth A Gayekward, 4th edition PHI
4. Digital Principles and Applications by Malvino and Leach, TMH, 1996, 4th edition.
5. Digital Circuit design by Moris Mano, PHI.
6. Switching theory and Logic design by A.Anand kumar, PHI
7. Operations amplifier by S.V.Subramanyam.

The Guidelines to be followed by the question paper setters in Physics for the VI Semester - end exams

PAPER TITLE: (ELECTIVE PAPER –VII-A): ANALOG AND DIGITAL ELECTRONICS

Paper- VII-A Semester – VI Maximum marks: 75 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 **5**, 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-601 GE
PAPER TITLE : ELECTIVE PAPER –VII-A: ANALOG AND DIGITAL ELECTRONICS	

Duration : 3Hours

Maximum marks : 75

Pass marks : 30 marks

Model paper –VII(A) Elective (Electronics)

Semester -VI

Elective Paper –VII-(A): Analog and Digital Electronics

SECTION-A

Time:3hr

Max.marks:75M

Answer any five of the following questions:

5x5=25M

1. Discuss the advantages of FET over BJT.
2. Explain the concept of Virtual Ground.
3. Describe the concept of OP-amp Summing amplifier.
4. The summing amplifier as $R_o=10K$, $R_1=10K$, $R_2=5K$, $R_3=6K$. If $V_1=6V$, $V_2= -3V$, $V_3= -0.8V$. Calculate V_0 ?
5. Explain the Working of Demultiplexer with circuit diagram.
6. Explain the working of TTL logic.
7. Explain the working of RS Flip flop .Write its Truth Table.
8. Find the gain of inverting amplifier with given data. $R_1= 5000\Omega$, $R_f= 60 K\Omega$.

SECTION-B

Answer any five of the following questions:

10x5=50M

9. Explain the construction , Working and V-I Characteristics of JFET.
10. Describe Construction and Working Of LED. Mention its application.
11. What are the Characteristics of an ideal OP-amp .Draw the block diagram of OP-amp. Define the term CMRR and Slew rate.
12. Derive the Expression per Closed loop Gain of an inverting Amplifier. Explain how OP-amp acts as an Integrator.
13. Explain the working of Integrator, Differentiator.
14. What is a Multiplexer? Explain its Working and Analogy.
15. Describe the Working of Master Slave JK Flip flop. Give its Truth Table.
16. Explain Asynchronous counter and Synchronous counter.

ELECTIVE PAPER –VII PRACTICAL: ANALOG AND DIGITAL ELECTRONICS

credits – 2

2 Hours per week

Minimum of 6 experiments to be done and recorded

1. Characteristics of FET
2. Characteristics of MOSEFT
3. Characteristics of LDR
4. Characteristics of OP-amp.(IC-741)
5. OP-amp as amplifier/inverting amplifier
6. OP-amp as integrator/differentiator
7. OP-amp as summing amplifier /difference amplifier
8. Master-Slave Flip-flop
9. JK Flip-flop

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III B.Sc. Physics – VI Semester – Paper –VIII (2019 – 20)

SEMISTER-VI Course Code: PHY -602 CE

credits - 3

4 hrs/week

CLUSTER ELECTIVES VIII-A

PAPER-VIII-A-1: INTRODUCTION TO MICROPROCESSOR AND MICROCONTROLLER

UNIT- I (10hours)

MICROPROCESSOR:

General architecture of microprocessor, architecture of 8085 microprocessor, 8085 pin diagram, Concept of data bus, address bus, and control bus, 8085 programming instruction classification.

UNIT-II: (10hours)

8085 Assembly Programming

Assembler-types, assembler directives, structure of assembly program, assembly language development tools.

Programs - addition, subtraction, multiplication and division.

UNIT-III (15hours)

8051 Architecture:

Types of microcontrollers- microcontroller architecture, CISC, RISC, operation of microcontroller, basic building blocks of microcontroller, comparison of microcontroller and microprocessor- block diagram of 8051-I/o pins and ports.

UNIT-IV: (13hours)

Application of Microcontroller:

Square wave generation, rectangular wave generator, sine wave generator, frequency counter, temperature control, stepper motor control.

UNIT-V: (12hours)

Interfacing:

Interfacing of keyboard, 7-Segment display, stepper motor and ADC (0844) Interfacing & DAC(0808/MC 1408) Interfacing.

REFERENCE BOOKS:

1. Unified Electronics – VI(A), Micro controllers and applications

2. THE 8051 micro controller and embedded systems using assembly and C, M.A. Mazidi, J.G.Mazidi and R.D.McKInlay second Ed.,2007 Pearson education India.
3. Unified Electronics – V(A),Microprocessor (Intel 8085)
4. Micro controllers in practice, I susena and Mitescu, 2005, Springer.

The Guidelines to be followed by the question paper setters in Physics for the VI Semester - end exams

CLUSTER ELECTIVES VIII-A

PAPER-VIII-A-1: INTRODUCTION TO MICROPROCESSOR AND MICROCONTROLLER

Paper- VIII-A-1 Semester – VI Maximum marks: 75 marks Duration: 3Hours

Weightage for the question paper

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

Note: T means one theory question.

- **Section-A** contains **8** short questions, out of these **8** questions, the student has to answer any **5**, 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 – VI	COURSE CODE : PHY-602 CE
PAPER TITLE : CLUSTER ELECTIVES VIII-A	

PAPER-VIII-A-1: INTRODUCTION TO MICROPROCESSOR AND MICROCONTROLLER

Duration : 3Hours

Maximum marks : 75

Pass marks : 30 marks

Model Paper- Sem VI

III B.Sc - PHYSICS (cluster) – VI SEMESTER

INTRODUCTION TO MICROPROCESSOR AND MICROCONTROLLERS

PHY- 602 CE

Max marks : 75

SECTION-A

Answer any FIVE of the following questions :

(5x5=25M)

- 1) Define data bus and address bus.
- 2) Write various types of assemblers.
- 3) Write about any five assembler directives.
- 4) Write about CISC.
- 5) Write about operation of microcontroller
- 6) Write about temperature controller
- 7) Write about frequency counter.
- 8) Explain the concept control of stepper motor.

SECTION – B

Answer any FIVE of the following questions :

(5x10 = 50 M)

- 9) Describe the general architecture of Microprocessor.
- 10) Draw the 8085 Microprocessor pin diagram and explain about different pins.
- 11) What are the assembly language tools?
- 12) Write ALP for subtraction of two 8-bit number.
- 13) Draw the pin diagram of 8051.
- 14) Write the basic building blocks of microcontroller.
- 15) Write ALP to generate rectangular wave form.
- 16) Discuss DAC interfacing with 8051.

PAPER-VIII-A-1: Practical: INTRODUCTION TO MICROPROCESSOR AND MICROCONTROLLER credits – 2 2 Hours per week

Minimum of 6 experiments to be done and recorded

1. To find that the given number is prime or not.

2. To find the factorial of a number.
3. Write a program to make the two numbers equal by increasing the smallest number and decreasing the largest number.
4. Use one of the four parts of 8051 for O/P interfaced to eight LED's simulate binary counter (8 bit) on LED's.
5. Program to glow first four LED then next four using TIMER application.
6. Program to rotate the contents of the accumulator first right and then left.
7. Program to run a count down from 9-0 in the 7 segment LED display.
8. To interface 7 segment LED display with 8051 Microcontroller and display 'HELP' in the 7 segment LED display.
9. To toggle '1234' as '1324' in the 7 segment LED.
10. Interface stepper motor with 8051 and write a Program to move the motor through a given angle in clock wise or counter clock wise direction.
11. Application of Embedded system: Temperature measurement, some information on LCD display, interfacing a key board.

DEPARTMENT OF PHYSICS
A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS &
SCIENCE
III B.Sc. 6th Semester (2019-20)
COURSE CODE : PHY-603 CE credits - 3

Cluster Elective Paper – VIII- A-2 : Computational Methods and Programming

No. of Hours per week : 04

Total Lectures : 60

UNIT – I (12 hrs)

1. Fundamentals of C language : C character set – Identifiers and keywords – structure of c program. constants- variables- Data types- Declarations of variables – Declaration of storage class – Defining symbolic constants – Assignment statement.
2. Operators : Arithmetic operators- Relational operators – Logic operators – Assignment operators – Increment and decrement operators – Conditional operators.

UNIT –II (12 hrs)

3. Expressions and I/O statements : Arithmetic expressions – precedence of arithmetic operators – Type converters in expressions – Mathematical (Library) functions – Data input and output – The getchar and putchar functions – Scanf – Printf simple programs.
4. Control statements : IF – ELSE statements – Switch statements – The operators – GO TO- while, DO-While, FOR statements – BREAK and CONTINUE statements.

UNIT – III (12 hrs)

5. Arrays : One dimensional and two dimensional arrays – Initialization –Type declaration – Inputing and outputting of data for arrays – Programs of matrices addition, subtraction and multiplication.
6. User defined functions : The form of C functions – Return values and their types – Calling a function – Category of functions. Nesting of functios. Recursion. ANSI C functions – Function declaration . scope and life of variables in functions.

UNIT – IV (12 hrs) (Algorithms and flow charts only)

7. Linear and Non-Linear equations : Solution of Algebra and transcendental equations – Bisection, Falsi position and Newton – Rhapson methods – Basic principles – Formulae – algorithms.
8. Simultaneous equations : Solutions of simultaneous linear equations – Guass elimination and Guass seidel iterative methods – Basic principles – Formulae- Algorithms.

UNIT – V (12 hrs) (Algorithms and flow charts only)

9. Interpolations : Concept pf linear interpolation – Finite differences – Newton’s and Lagrange’s interpolation formulae – principles and Algorithms.
10. Numerical differentiation and integration : Numerical differentiation –

algorithm for evaluation of first order derivatives using formulae based on Taylor’s series – Numerical integration – Trapezodal and Simpson’s 1/3 rule – Algorithms.

REFERENCE BOOKS :

- 1.Introductory methods of Numerical Analysis : SASTRY
2. Numerical Methods : Balaguruswamy
3. Programming in ANSI C (TMH) : Balaguruswamy

4.Programming with ‘C’ – Byron Gottfried, Tata Mc Graw Hill

The Guidelines to be followed by the question paper setters in Physics for the VI Semester - end exams

Cluster Elective Paper – **VIII- A-2** : Computational Methods and Programming

Paper- VIII-A-2 Semester – VI Maximum marks: 75 marks Duration: 3Hours

Weightage for the question paper

Syllabus	Section-A (Short answer questions)	Section-B (Essay questions)
Unit-1 (30 Marks)	T+T	2
Unit-2 (30 Marks)	T+T	2
Unit-3 (30Marks)	T+T	2
Unit-4 (15 Marks)	T	1
Unit-5 (15 Marks)	T	1

Note: T means one theory question.

- **Section-A** contains **8** short questions, out of these **8** questions, the student has to answer any **5**, 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 – VI	COURSE CODE : PHY-603 CE
PAPER TITLE : Cluster Elective Paper – VIII- A-2 : Computational Methods and Programming	

Duration : 3Hours

Maximum marks : 75

Pass marks : 30 marks

Model Paper :Sem VI
III B.Sc - PHYSICS (cluster) – VI Semester

COMPUTATIONAL METHODS AND PROGRAMMING

Paper Code : PHY 603 CE

Max.Marks : 75

SECTION-A

Answer any FIVE of the following questions : (5x5=25M)

- 1) Write different data types in C with Examples.
- 2) Structure of C programme with Examples.
- 3) Explain about Puchar & getchar.
- 4) Explain about IF-Else Statement.
- 5) Define 2D array in C with example
- 6) Define Function with Examples.
- 7) Write the false position algorithm
- 8) Describe the Trapezoidal rule

SECTION-B

Answer any FIVE of the following questions : (5x10=50M)

- 9) Explain about storage classes in C
- 10) Explain different operators available in C
- 11) Explain about iterative statements in C.
- 12) Explain about Print f() & Scan f() function with examples.
- 13) Write a program for matrix multiplication
- 14) Explain about Recursion with example programme.
- 15) Explain about nesting of functions with example
- 16) Write the algorithm and flowchart of Newton Raphson formula.

Cluster Elective Paper – VIII-A-2 : Practical
Computational Methods and Programming

2 hrs/ week

credits - 2

Minimum of 6 experiments to be done and recorded

1. Write a program that reads an alphabet from keyboard and display in the reverse order.
2. Write a program to read and display multiplication of tablets.
3. Write a program for converting centigrade to Fahrenheit temperature and Fahrenheit temperature centigrade.
4. Write a program to find the largest element in an array.
5. Write a program based on percentage calculation , the grade by entering the subject marks . (If percentage > 60 , I class, if percentage between 50 & 60 II class, if percentage between 35 & 50 III class, if percentage below 35 fail)
6. Write a program for generation of even and odd numbers up to 100 using while, do – while and for loop.
7. Write a program to solve the quadratic equation using Bisection method.
8. Write a program for integration of function using Trapezoidal rule.
9. Write a program for solving the differential equation using Simpson's 1/3 rule.

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III B.Sc. 6th Semester (W.E.F 2019-20)
COURSE CODE : PHY-604 CE

Cluster Elective Paper – **VIII-A-3: Electronic Instrumentation**

No.of Hours per week: 04

Total Lectures: 60

UNIT -1 (12 Hours)

1. Basic of measurements: Instruments accuracy, precision, sensitivity- errors in measurements- Basic meter movement-PMMC (Permanent Magnetic Moving Coil).
2. Measurement of dc current: DC ammeter- multi range ammeters-the ARYTON Shunt or universal Shunt.
3. Measurement of dc voltage: DC Voltmeter – Multi Range Voltmeter- Voltmeter sensitivity.

UNIT – II (10 HOURS)

4. **Analog Multimeter:** Multimeter - as dc ammeter-as dc voltmeter-as ac voltmeter- as ohm meter-Multimeter operating instructions.
5. Digital instruments: Principle and working of digital instruments, characteristics of a digital meter, working principle of digital voltmeter.

UNIT –III (14 HOURS)

6. CRO: Block diagram of basic CRO, construction of CRT, electron gun, electrostatic focusing and acceleration (only explanation), time base operation, synchronization, front panel controls, specifications of CRO and their significance.
7. Applications CRO: Measurement of voltage- dc and ac, frequency, time period. Special features of dual trace CRO. Digital storage oscilloscope: block diagram and principle of working.

UNIT – IV (12 HOURS)

8. Diode as Rectifier – Half wave rectifier, Full wave rectifier – construction, working and efficiency, ripple factor, Filter circuits.
9. Feedback in Electronic circuits – Positive and Negative feedback, expressions for gains, advantages of negative feedback, Oscillators, Barkhausen criteria, RC phase shift oscillator (no derivation)

UNIT – V (12 HOURS).

10. Signal Generators: Block diagram, working and specifications of low frequency signal generators, pulse generator, function generator – wave analysis: Definition of wave analyzer- Types of Wave Analyzers- Basic Wave analyzer.
11. Bridges: Measurement of resistance by Wheat stone's Bridge- Sensitivity of Wheat stone's Bridge- Applications of Wheat stone's Bridge-Limitations of Wheat stone's Bridge.

REFERENCE BOOKS :

1. A text book in electrical technology by B.L. Thereja (S.Chand & CO)
2. Digital circuits and systems by venugopal 2011 (Tata Mcgraw Hill)
3. Digital Electronics by SubrathaGoshal 2012 (Cengage Learning)
4. Electronic Instrumentation by HS Kalsi (Tata Mcgraw Hill)

The Guidelines to be followed by the question paper setters in Physics for the VI Semester - end exams

Cluster Elective Paper – **VIII-A-3: Electronic Instrumentation**

Paper- VIII-A-3 Semester – VI Maximum marks: 75 marks Duration: 3Hours

Weightage for the question paper

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

Note: T means one theory question

- **Section-A** contains **8** short questions out of these **8** questions, the student has to answer any **5**, 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 – VI	COURSE CODE : PHY-604 CE
PAPER TITLE : Cluster Elective Paper – <u>VIII-A-3: Electronic Instrumentation</u>	

Duration : 3Hours

Maximum marks : 75

Pass marks : 30 marks

Model Paper :Sem VI
III B.Sc - PHYSICS (CLUSTER) – VI Semester
ELECTRONIC INSTRUMENTATION

Paper Code : PHY 604 CE

Max.Marks:75

SECTION-A

Answer any FIVE of the following questions : (5x5=25M)

- 1) Explain the following terms (a) precession (b) sensitivity.
- 2) Explain Multirange d.c voltmeter with a circuit diagram.
- 3) Write briefly the specifications of an electronic voltmeter.
- 4) Explain the function of various parts of an electronic gun.
- 5) Explain the time base operation of CRO.
- 6) Write the characteristics of a digital meter.
- 7) Explain the working of function generator.
- 8) What are the Limitations of Wheat stone's Bridge

SECTION-B

Answer any FIVE of the following questions : (5x10=50M)

- 9) Explain different types of errors that occur in measurements.
- 10) Explain the principles of voltage measurement with a block diagram.
- 11) Draw the basic block diagram of cathode ray oscilloscope and explain the functions of each block.
- 12) Explain with a block diagram the principle and working of digital storage oscilloscope .
- 13) Explain the working of a Multimeter as micro ammeter- as dc ammeter-as dc voltmeter-as ac voltmeter- as ohm meter
- 14) Explain the principle and working of digital instruments .
- 15) Explain the operation of a signal generator with the help of a suitable block diagram .
- 16) Explain the principle and working of Wheat stone's bridge .

Cluster Elective Paper – VIII-A-3-Practical : Electronic Instrumentation
2hrs/Week.

Minimum of 6 experiments to be done and recorded.

1. Construction of Half wave rectifier and calculation of ripple factor with C filter.

2. Construction of Full wave rectifier and calculation of ripple factor with C and pi filters.
3. Study the limitations of a multimeter for measuring high frequency voltage and currents.
4. Measurement of voltage , frequency, time period and phase angle using CRO.
5. Calculate Power factor of an inductive circuit.
6. Measurement of rise, fall and delay times using a CRO.
7. Measurement of distortion of a RF signal generator using distortion factor meter.
8. Measurement of R with Wheat stone bridge.

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Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF POLITICAL SCIENCE

MINUTES OF BOARD OF STUDIES

EVEN SEMESTER



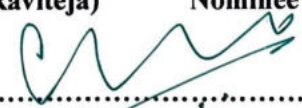
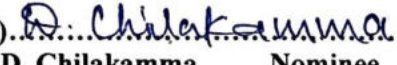
21-10-2019

E.V. Sem

Minutes of the meeting of the Board of Studies in Political Science of AG & SG Siddhartha Degree College of Arts & Science, Vuyyuru, held at 10.30 A.M on 21-10-2019 in the Department of Political Science.

Dr. G. Veerraju, HOD, Political Science presided over the BOS meeting

Members Present:

- 1).......... **Chairman** Head, Department of Political Science
(Dr. G. Veerraju) AG & SG S Degree College of Arts & Science
Vuyyuru-521165
- 2).......... **University** HOD, Dept of Politics The Hindu
(Dr. K. Raviteja) **Nominee** College Machilipatnam
- 3).......... **Academic Council** Head, Department of Political Science
(Dr. G. David Livingston) **Nominee** DN.R College Bhimavaram
- 4).......... **Academic Council** Lecturer in Political Science
(D. Chilakamma) **Nominee** Sir C.R.Reddy College Eluru

AGENDA

1. To review and recommend changes to the syllabi, model paper and guidelines in the 2nd, 4th and 6th 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 : The following resolutions were passed unanimously :

- 1) Resolved to include the topic "YSR Party by Replacing Akhalidal" in IIIrd Unit of Paper IV entitled "Indian Political Process" of fourth Semester.
- 2) To continue the existing syllabi of all other papers without any change for the academic year 2019-20;
- 3) To adopt the following teaching and evaluation methods:

following the Guidelines communicated by
affiliated University / A.P.H.R / UGC and the
Commissionerate of Higher Education

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, 25 marks shall be allocated for internal assessment;
- ii) Out of these 25 marks, 15 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. 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 75 for the present III year students and 70 for I&II 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 impart new skills of learning as frequently as possible.
- 8) 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.


Chairman

A.G. & S.G.SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), (2019-20) VUYYURU

SEMESTER – II

CODE: POL – 201C

PAPER TITLE : CONCEPTS THEORIES AND INSTITUTIONS

Max. Marks: 100

External: 70

Internal: 30

Unit - I: Democracy

Definition and Meaning of Democracy, forms of Democracy – Conditions necessary for the success of democracy, Merits and demerits of democracy

Unit - II: Ideology

- A) Individualism, Anarchism Fascism, Marxism and Gandhism
B) Theory of Separation of Powers: Montesquieu's theory of separation of powers.

Unit - III: Constitutionalism

Legislature Unicameralism and Bi-Cameralism- Powers and Functions of Legislature- Role of opposition parties in the legislature- Committee System-Stages of making the Law – Reasons for the decline of the importance of the legislature.

Unit - IV: Executive


- A) Meaning and Importance of Executive-types of Executive- Functions of Executive- Delegated Legislations features of Parliamentary- Executive Merits and demerits - Features of presidential executive merits and demerits.
B) Judiciary meaning and importance of Judiciary- Structure of Judiciary Powers and Functions of Judiciary.

Unit-V: Popular Control

Welfare State and Human Rights - Meaning and importance of popular control, methods of popular control - Meaning and definition of welfare state - Functions of welfare state reasons for the growing importance to the welfare state - United Nations Declaration of Human Rights

Reference Books:

1. Principles of Political Science, Concept, Theories and institutions – Telugu Academy
2. Principles of Political Science – A. C Kapoor
3. Principles of Political Science, Concept, Theories and institutions – Ambedkar Open University
4. Principles of Political Science – J. C. Johari
5. Principles of Political Science – R.C. Agarwal



D. Chitragama
Unit V

Political Science	POL 401C	2019-20	II BA
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SEMESTER – IV

SYLLABUS

PAPER - IV

INDIAN POLITICAL PROCESS

UNIT – I: Introduction to Indian Party System :

- Definition and role of Political Parties
- Characteristics of Indian Party System
- Classification of Indian Political Parties

UNIT – II: Elections in India :

- Election Commission - Structure , Powers and Functions
- Electoral Reforms
- A Critical Study of Recent Lok Sabha and Legislative Assembly elections in A.P.

UNIT – III: Political Parties in India:

- Indian National Congress - Organization, Policies & Programmes
- BJP - Organization, Policies & Programmes - its role in National Politics
- Communist Parties - CPI and CPI (M) - Policies & Programmes
- YSR, DMK and AIADMK, Telugu Desam Party, T.R.S

Unit-IV: Voting Behavior :

- Voting Behaviour and its determinants.
- Caste in politics.
- Class in politics.
- Gender in politics.
- Religion in politics

UNIT – V: Trends in political System

- Coalition Politics in India - Causes and limitation
- National Integration : Meaning , importance and threats .
- Social movements : Women and Environmental Movements

REFERENCE BOOKS:

- Indian Constitution and Government - R.L.Gupta
- Constitutional History of India - M.V.Pylee
- Indian Government and Politics - S.S.Awasti
- Indian Government and Politics - J.C.Johari
- Introduction for Constitution of India - D.D.Basu
- Indian Government and Politics - D.C.Gupta
- Indian Government and Politics - Telugu Academy



D. Chitamma,
Principal

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE, VUYYURU
(An autonomous college in the jurisdiction of Krishna University, Machilipatnam, A.P)

Political Science	POL 601GE	2019-20	III BA
Semester-VI	Syllabus		Paper –VII C(Elective)

LOCAL SELF - GOVERNMENT IN ANDHRA PRADESH

Unit- I: Evolution of Local Self-Government in India

1. Constitutional Provisions on local Self-Government
2. Recommendations of Balwanthrai Mehta and Ashok Mehta Committees on Local Self Government

Unit-II: Importance of Constitutional Amendments

1. 73rd Amendment – Rural Local bodies; Basic features
2. 74th Amendment – Urban Local bodies; Basic features

Unit-III: Structure and functions of Panchayati Raj in Andhra Pradesh

1. Gram Panchayat
2. MandalParishad
3. ZillaParishad

Unit-IV: Structure and functions of urban local bodies in Andhra Pradesh

1. Nagar Panchayats
2. Municipalities
3. Municipal Corporations

Unit-V: Role of leadership and Emerging Challenges

1. Emerging patterns of leadership
2. Problems of autonomy: Financial and Administrative sphere

Reference Books:

1. Maheswari, S.R., Local Self Government in India, Orient longman, 1971
2. Venkatesan V, InstitutionalisingPanchayati Raj in India, Institute of Social Sciences, New Delhi 2002
3. BaviskarB.S, Inclusion and Excision in Local Governance, Sage Publication, New Delhi2009.
4. M.P. Dube and Padalia, M (Ed), Democratic Decentralization and Panchayati raj in India, Anamika Publishers, New Delhi, 2002.
5. BalaRamulu, CH and Ravinder D, "Five Decades of Democratic Decentralization process in Andhra Pradesh" in Social Change (Journal of the Council for Social Development published by Sage International) Vol.42, No.2, PP165-186, June 2012.



D. Chilakamma.
S. Kumar

Political Science	POL 602CE	2019-20	III BA
Semester-VI	Syllabus		Paper –VIII C1 (Clusters)

INTERNATIONAL RELATIONS

Unit- I: Basic Concepts of International Relations

1. Meaning, Nature and Scope of International Relations
2. (a). Balance of power (b). National interests (c). Collective Security (d). Diplomacy

Unit-II: Approaches to the study of International Relations

1. Idealism – Woodrow Wilson
2. Classical Realism – Hans Morgenthau
3. Neo – realism – Kenneth Waltz

Unit-III: Phases of International Relations (1914-1945)

1. Causes for the First World War
2. Causes for the Second World War

Unit-IV: Phases of International Relations (1945 onwards)

1. Origins of First Cold War
2. Rise and Fall of Détente
3. Origins and the End of Second Cold War

Unit-V: International Organisation

1. The role of UNO in the protection of International Peace
2. Problems of the Third World : Struggle for New International Economic Order

Reference Books:

1. Jackson, R and Sorensan Y, Introduction to International Relations; Theories and approaches, New York, OUP, 2008.
2. Baylis, J and Smith, S (Eds), The Globalization of World Politics; An Introduction to International Relations, Oxford, OUP, 2011
3. AneekChatterjee, International Relations Today; Concepts and Applications, New Delhi, Pearson Education, 2008.
4. E.H. Carr, International relations between the two world Wars, Lodon, Palgrave Macmillan, 2004.



D. Chidambaram.
1. Anil Kumar

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE, VUYYURU

(An autonomous college in the jurisdiction of Krishna University, Machilipatnam, A.P)

Political Science	POL 603CE	2019-20	III BA
Semester-VI	Syllabus	Paper -VIII C2 (Clusters)	

INDIAN FOREIGN POLICY

Unit- I: Evolution of Indian Foreign of Policy

1. Determinants of Indian Foreign of Policy
2. Continuity and change in Indian Foreign Policy

Unit-II: Non-Alignment and UNO

1. The role of India in the Non-Alignment Movement
2. Relevance of Non-Aligned Movement in the Contemporary World
3. Role of India in the UNO in protection of International Peace

Unit-III: India's Relation with USA and China


1. Indo- US Relations: Pre- Cold War Era, Post- Cold War Era
2. India – China Relations: Pre- Cold War Era, Post- Cold War Era

Unit-IV: India and her Neighbours

1. Indo- Pakistan Relations
2. India's role in South Asian Association of Regions Cooperation (SAARC)

Reference Books:

1. David Scott (Ed), Handbook of India's International Relations, London, Routledge,2011
2. Ganguly, S (Ed), India as an Emerging Power,Portland, Franck class, 2003
3. Pant, H, Contemporary Debates in Indian Foreign and Security Policy, London, Palgrave Macmillian,2008
4. Tellis, A and Mirski, S (Eds), Crux of Asia; China, India, and the Emerging global Order, Washington, Carnegie endowment for international peace,2013
5. Muni, S.D, India's Foreign Policy Delhi CUP, 2009
6. Alyssa Ayres and Raja Mohan, C (Eds), Power Realignment in Asia: China, India and the United States, New Delhi, Sage, 2002
7. Appadorai, A, Domestic roots of Indian Foreign Policy, New Delhi, OUP,1971


D. Chidambaram.

AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE, VUYYURU
(An autonomous college in the jurisdiction of Krishna University, Machilipatnam, A.P)

Political Science

POL 604CE

2019-20

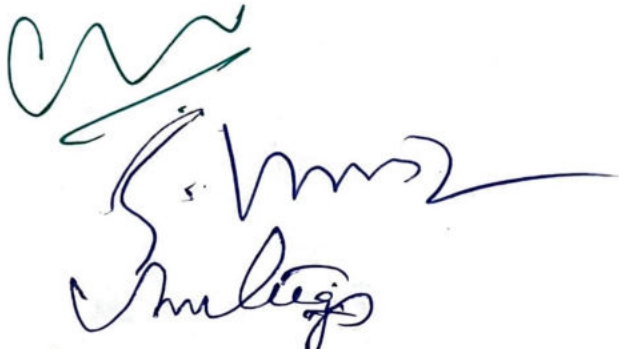
III BA

Semester-VI

Syllabus

Paper -VIII C3 (Clusters)

GROUP PROJECT WORK


D. Chidambaram.

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

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

Accredited by NAAC with "A" Grade

2019-2020



DEPARTMENT OF TELUGU

MINUTES OF BOARD OF STUDIES

EVEN SEMESTER

16-10-2019



తెలుగు విభాగం పాఠ్య నిర్ణయక మండలి (బోర్డు ఆఫ్ స్టడీస్) సమావేశం - 9.

తేది. 16-10-2019 ఉదయం 10.30 ని || లకు అడుసుమిల్లి గోపాలకృష్ణయ్య చెఱకు రైతుల సిద్ధార్థ డిగ్రీ కళాశాల ఉయ్యూరు. తెలుగు శాఖలో 2019- 2020 విద్యా సంవత్సరానికి తెలుగు శాఖాదిపతి శ్రీ జి.శ్రీనివాస్ అధ్యక్షతన జరిగినది.

తెలుగు పాఠ్యాంశ నిర్ణయక మండలి సమావేశానికి చర్చనీయాంశాలు.

1. 2019- 2020 విద్యా సంవత్సరంలో ప్రథమ బి.ఎ., బి.కాం., బి.యస్ సి., తరగతులకు రెండవ సెమిస్టరుకు సంబంధించిన పాఠ్యాంశాల నిర్ణయం గురించి.
2. తెలుగు శాఖ ఆధ్వర్యంలో జర్నలిజం సర్టిఫికేట్ కోర్సు నిర్వహించడం గురించి.
3. అధ్యక్షుని అనుమతితో ఇతర అంశాలు ఏవైనా.

తీర్మానాలు:

తేది.16-10-2019 ఉదయం 10.30 ని || లకు అడుసుమిల్లి గోపాలకృష్ణయ్య చెఱకు రైతుల సిద్ధార్థ డిగ్రీ కళాశాల, ఉయ్యూరులో 2019 -2020 విద్యా సంవత్సరానికి రెండవ భాషగా తెలుగు పాఠ్యాంశాలు నిర్ణయించిన తరువాత తెలుగు పాఠ్య నిర్ణయక మండలి (బోర్డు ఆఫ్ స్టడీస్) సభ్యులు ఈ క్రింది తీర్మానాలను ఏకగ్రీవంగా ఆమోదించడమైనది.

- 1 2019 - 2020 విద్యా సంవత్సరం ప్రథమ బి.ఎ., బి.కాం., బి.యస్.సి తరగతులకు రెండవ సెమిస్టర్ సెలబ్స్ లో ఉన్ననీతి పద్యాలను తీసివేసి దానికి బదులుగా సెలబ్స్ లో ఉన్న బతుకాట నవల నుండి అదనంగా ఒక ప్రశ్న 10 మార్కులకు ఇవ్వాలని తీర్మానించడమైనది.
2. 2019 -2020 విద్యా సంవత్సరం ప్రథమ బి.ఎ., బి.కాం., బి.యస్.సి., ప్రశ్న పత్రం ఎక్స్ టర్నల్ 70 మార్కులకు, ఇంటర్నల్ 30 మార్కులకు ఇవ్వాలని తీర్మానించడమైనది.
3. 2019- 2020 విద్యా సంవత్సరం ప్రథమ బి.ఎ, బి.కాం., బి.యస్ సి. విద్యార్థులకు కనీస పాస్ మార్కులు లేవని తీర్మానించడమైనది.
4. తెలుగు శాఖ ఆధ్వర్యంలో జర్నలిజం సర్టిఫికేట్ కోర్సు నిర్వహించాలని తీర్మానించడమైనది.

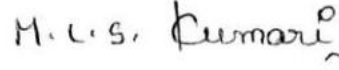
హాజరైన సభ్యులు :

1. శ్రీ జి.శ్రీనివాస్,



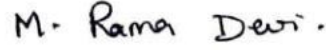
తెలుగు కాఖాధిపతి, పాఠ్య నిర్ణాయక మండలి అధ్యక్షులు.

2. శ్రీమతి ఎమ్.ఎల్.ఎస్.కుమారి,



తెలుగు అధ్యాపకురాలు.

3. శ్రీమతి ఎమ్. రమాదేవి,



తెలుగు అధ్యాపకురాలు.

4. డా. ఎ. కేదారి,



తెలుగు కాఖాధిపతి,

గవర్నమెంటు డిగ్రీ కళాశాల, పామర్రు.

5. డా. కె. సుధాకర్,

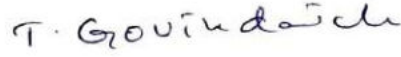


తెలుగు కాఖాధిపతి,

ఎస్. ఎస్ & ఎస్ కళాశాల, నరసరావు పేట. గుంటూరు.

విషయ నిపుణులు (Subject Expert).

6. డా. టి. గోవిందయ్య,

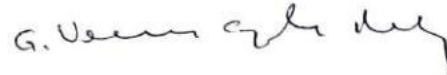


తెలుగు కాఖాధిపతి,

మార్షింగ్ స్టాఫ్ కళాశాల, ఫిరంగిపురం, 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 విశ్వేశ్వరి,



విద్యార్థి ప్రతినిధి.



II SEMESTER – SYLLABUS

ప్రాచీన కవిత్వం, ఆధునిక కవిత్వం, కథానికలు, ఉపవాచకం (నవల), నీతి పద్యాలు.

I. ప్రాచీన కవిత్వం:

1. **సాయుజ్యము - ధూర్జటి - శ్రీకాళహస్తి మహాత్మ్యము 2వ అశ్వాసం (109 -139)**

త్రేతాంతంబుననొక్క.....నుండి పన్నుగంబు వరకు.

ప్రతిపదార్థాలకు ఇవ్వదగిన పద్యాలు:

1. త్రేతాంతంబున మచ్చోటికిన్.
2. దగ్గటి, "ఎవ్వడో..... విషణ్ణ చిత్తుడై.
3. అంతటఁ గొంతసేపునకు..... బట్టఁ జూతురే?".
4. "ఎక్కడి దుర్మదుండో?..... గూడె దైవమున్.

2. **సుభద్రా పరిణయం - చీమకూర వేంకట కవి - విజయవిలాసం -3వ అశ్వాసం(పద్యాలు 93-139)**

"తనయుని పెండ్లికేగ వలె దాత్రికి" నుండి "దేరిక్కి దంపతులరుగ" వరకు.

ప్రతి పదార్థాలకు ఇవ్వదగిన పద్యాలు:

1. కలరొకొ యెవ్వరైనమురారి చెంగటన్.
2. పొలయలు కందు పేడుకొను..... మంగళసూత్రమయ్యెడన్
3. పుణయంబొప్పుగ గృష్ణుని గని బల్కగన్.
4. చెల్లెల లెస్సలా పెరటి చెట్టుగ నీకు నెంతయున్

II. ఆధునిక కవిత్వం:

1. ముసాఫరులు -- జాషువా
2. మేఘదూతం -- పుట్టపర్తి నారాయణాచార్యులు

III. కథానికలు :

1. ఆకలి - కొలకలూరి ఇనాక్
2. నమ్ముకున్న నేల - కేతు విశ్వనాథ రెడ్డి

IV. ఉపవాచకం (నవల):

డా|| వి. ఆర్. రాసాని - బతుకాట

సంప్రదించవలసిన పుస్తకాలు : 1 డిగ్రీ ప్రథమ సంవత్సరం రెండవ సెమిస్టర్ పాఠ్య పుస్తకం - సాహితీ కౌముది.

2 డిగ్రీ ప్రథమ సంవత్సరం - సాహితీ లత (పాతది)

3 బతుకాట - డా||వి.ఆర్.రాసాని.

1.

2.

3. T. Govindan

Time : 3hrs

ప్రాచీన కవిత్వం, ఆధునిక కవిత్వం, కథానికలు, ఉపవాచకం (నవల), నీతి పద్యాలు

ప్రార్థ - ఎ

1. ఈ క్రింది వానిలో ఒక పద్యానికి సందర్భ, సహిత, ప్రతిపదార్థ, తాత్పర్యాలను రాయండి. $1 \times 8 = 8$ మార్కులు.

ఎ. డగ్గటి, "ఎవ్వడో కటకటా! శివలింగముమీది రత్నములే
గగ్గులకాటగల్చి, ములుకంపలు తీవలు పెట్టి, నేడు నా
కగ్గోనరించి పోయి, నీక నేమననీర్లు, మదీయబాగ్య మి
ట్లగ్గి బడంగః జేసిన మదాండుని?" నంచు విషణ్ణ చిత్తుడై.

బి. కలరోకొ యెవ్వరైన నవు గాదని యడ్డము వల్కువారలీ
యిల? మఱి దానెఱుంగనటు లెంతటి మాయలకాడు కన్యకా
తిలకము దారవోయ వసుదేవునిః గట్టడససి, పేయి క
న్నులు గల పేలుపుం బలెః గనుంగొను చుండ మురారి చెంగటన్.

2. ఈ క్రింది వానిలో నాల్గింటికి సందర్భ, సహిత, వ్యాఖ్యలు రాయండి. $4 \times 3 = 12$ మార్కులు.

ఎ. జాలు కపర్దికి బెట్ట జాతురె.

బి. రాత్రి శివరాత్రిగా జాగరమ్ము జేసి.

సి. ఒడలెల్ల గన్నులుగ జాసిరి

డి. పుట్టిల్లును జొచ్చినిల్లనయి వృద్ధి నొసంగెడు నీకునెంతయన్.

ఇ. భస్మమైనారు నామ రూపంబు లేక

ఎఫ్. అనుగమింపవు నిన్ను దేహంతరమున

జి. అతడు సామాన్యుడా! ఆంధ్రజాతికి పోగరు

హెచ్. పుల్లరికి జరిగెనట పోరు

ప్రార్థ - బి

3. సర్వము, ఏనుగు శివసాయుజ్యమునకు ఎట్లు అర్థత సాదించినవి ? 10 మార్కులు.

(లేదా)

'సుభద్రా పరిణయం'లో ఆచరించిన తెలుగు వారి సంస్కృతీ సాంప్రదాయాలను తెల్పండి.

4. 'ముసాఫరు' లలో భారతదేశంలోని మంచి చెడ్డలను జాషువా చెప్పిన విధానం తెలపండి. 10 మార్కులు.

(లేదా)

'మేఘదూతం' లో వర్ణింపబడిన ప్రసిద్ధ ప్రదేశాల గొప్పతనాన్ని తెల్పండి

5. 'ఆకలి' కథ సారాంశంను తెల్పండి. 10 మార్కులు.

(లేదా)

'నమ్ముకున్న సేల' లో రచయిత ఇచ్చిన సందేశం ఏమిటి ?

6. వెంకీజీ పాత్ర ప్రాధాన్యాన్ని తెల్పండి. 10 మార్కులు.

(లేదా)

గుర్రప్ప పాత్ర ప్రాధాన్యాన్ని తెల్పండి

7. 'బతుకాట' నవలలోని సామాజిక పరిస్థితులను వివరించండి. 10 మార్కులు.

(లేదా)

'బతుకాట' నవల నామోచిత్యాన్ని వివరించండి.



VUYYURU – 521 165, Krishna Dist.

(An Autonomous College in the jurisdiction of Krishna University, Machilipatnam, A.P., India)

RE - ACCREDITED at 'A' NACC

I year B.A, B.Com, B.sc.

Telugu II Semester – Guidelines to paper setters

పాఠ్య - ఎ

1వ ప్రశ్న : సందర్భ, సహిత, ప్రతి పదార్థ, తాత్పర్యాలు : ప్రాచీన కవిత్వంలోని సాయుజ్యము మరియు సుభద్రా పరిణయంలోని ఈ క్రింది పద్యాల నుండి ఒక్కొక్కటి యొప్పున మొత్తం 2 ఇవ్వవలెను.

సాయుజ్యము - ధూర్జటి

1. త్రేతాంతంబున నొక్క మచ్చోటికిన్.
2. డగ్గటి, "ఎవ్వడో విషణ్ణ చిత్తుడై.
3. అంతటఁ గొంతసేపునకు..... బెట్టఁ జూతురే?"
4. "ఎక్కడి దుర్మదుండో?..... గూడె దైవమున్

సుభద్రా పరిణయం - చేమకూర వేంకట కవి

1. కలరోకో యెవ్వరైన మురారి చెంగటన్.
2. పొలయులు కందు వేడికోను.....మంగళ సూత్రమయ్యెడన్.
3. ప్రణయంబొప్పుగ గృష్ణుని గని బల్కగన్.
4. చెల్లెల లెస్సలా పెరటి చెట్టగ నీకు నెంతయున్

2వ ప్రశ్న : సందర్భ, సహిత, వ్యాఖ్యలు : సాయుజ్యము నుండి 2, సుభద్రా పరిణయం నుండి 2, ముసాఫరులు నుండి 2, మేఘదూతం నుండి 2 మొత్తం 8 ఇవ్వవలెను.

పాఠ్య - బి

సూచన : 3,4వ ప్రశ్నలలో 1 ప్రశ్న కథ గురించి, మరొక ప్రశ్న కవి, కవితా వైభవం, కవితా లక్షణాలు గురించి ఇవ్వవచ్చు. కాని రెండు ప్రశ్నలు కవి, కవితా వైభవం, కవితా లక్షణాలు గురించి ఇవ్వకూడదు.

3వ ప్రశ్న : వ్యాసరూప సమాధాన ప్రశ్న: ప్రాచీన కవిత్వంలో 'సాయుజ్యం' నుండి 1 'సుభద్రా పరిణయం' నుండి 1 మొత్తం 2 ప్రశ్నలు ఇవ్వవలెను.

4వ ప్రశ్న : వ్యాసరూప సమాధాన ప్రశ్న: ఆధునిక కవిత్వంలో 'ముసాఫరులు' నుండి 1 'మేఘదూతం' నుండి 1 మొత్తం 2 ప్రశ్నలు ఇవ్వవలెను.

5వ ప్రశ్న : వ్యాస రూప సమాధాన ప్రశ్న: కథానికలలో 'ఆకలి' నుండి 1 'నమ్ముకున్న నేల' నుండి 1 మొత్తం 2 ప్రశ్నలు ఇవ్వవలెను.

6వ ప్రశ్న : వ్యాసరూప సమాధాన ప్రశ్న: బతుకాట నవల నుండి ప్రధాన పాత్రలైన వెంకోజీ, సిద్దోజీ, గుర్రప్ప, రేణుకమ్మ - బంగారప్ప పాత్రల నుండి 2 ప్రశ్నలు ఇవ్వవలెను.

7వ ప్రశ్న : బతుకాట నవల లోని సామాజిక పరిస్థితులు, నవల నామోచిత్యం, కళాకారుల జీవన విధానం వంటి అంశాల నుండి 2 ప్రశ్నలు ఇవ్వవలెను.

**ADUSUMILLI GOPALAKRISHNAIAH & SUGAR CANE GROWERS
SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU-**
(Autonomous)

Accredited by NAAC with "A" Grade

2019-20



DEPARTMENT OF ZOOLOGY
MINUTES OF BOARD OF STUDIES

16- 10 -2019 (EVEN SEMESTER)



2

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 10.30 AM on 16-10-2019 in the Department of Zoology.

Smt.D.A. Kiranmayee. ...

Presiding

Members Present:

- 1) S. Aruna Kiranmayee 16/10/19 Chair person Head, Department of Zoology,
(Smt. D.A.Kiranmayee.) 16/10/19 A.G&S.G.S Degree College of
Vuyyuru-521165.
- 2) J.N. Lavanya Latha 16/10/19 University Nominee Dr. J.N.Lavanya Latha,
(Dr.J.N.Lavanya Latha.) 16/10/19 Krishna University,
Machilipatnam.
- 3) Dr. K. Daniel 16/10/19 Academic Council Head, Department of Zoology,
(Dr. K.Daniel.) 16/10/19 Nominee JKC College,
Guntur,
- 4) Dr. B. Elia 16/10/19 Academic Council Head, Department of Zoology,
(Dr. B. Elia.) 16/10/19 Nominee Gov. Degree College,
Pitapuram.
- 5) M. Lakshmi Priyanka 16/10/19 Member Lecturer in Zoology,
(kum.M.Lakshmi Priyanka.) 16/10/19 A.G&S.G.S Degree College
Vuyyuru-521165.
- 6) B. Appala Naidu 16/10/19 Industrialist Asst. Project Manager,
(B. Appala Naidu.) 16/10/19 RGCA
Manikonda.
- 7) Ch. Chiranjeevi 16/10/19 Student Represent P.hd -Research Scholar,
(Ch.Chiranjeevi.) 16/10/19 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 II Semester of I B.Sc (B.Z.C) for the academic year 2019-20.
2. To recommend the syllabi (Theory & Practical), Model question paper for IV Semester of II B.Sc (B.Z.C) for the academic year 2019-2020.
3. To recommend the syllabi (Theory & Practical), Model question paper for General Elective -A & Cluster Elective - B to the VI Semester of III B.Sc (B.Z.C) for the academic year 2019-20.
4. To recommend the Blue print for the semester end exam for IV semester of II year. To followed by Blue print for VI semester.
5. To recommend the syllabi (Theory & Practical), Model question paper and Blue print of II semester of I B.Sc for the academic year 2019-20.
6. To recommend a Certificate course on Organic farming to IV semester of II year for the academic year 2019-2020.
7. To recommend the teaching and evolution methods to be followed under Autonomous statues.
8. Any other matter.

B. Arunakishanmayee
Chairman. 16/10/19

RESOLUTIONS

1. It is resolved to continue the same syllabi (Theory & Practical), model question paper of II semester of I B.Sc. (B.Z.C), under Choice Based Credit System (CBCS) for the academic year 2019 – 20.
2. It is resolved to continue the same syllabi (Theory & Practical) , for IV semester of II B.Sc. (B.Z.C) and to be followed the model paper (70:30) for IV semester of II B.Sc.(B.Z.C)
3. It is resolved to continue the same syllabi (Theory & Practical), model papers of under Choice Based Credit System (CBCS) to VI semester General Elective – A (Immunology) and Cluster Elective – B (Principles of Aquaculture, Aquaculture Management, Postharvest Technology.) to the VI semester of III B.Sc (B.Z.C) for the academic year 2019 – 20.
4. It is resolved to follow the Blue prints of II, IV semesters of I,II for the academic year, 2019-20. It is resolved to continue the same Blue print to VI semester of III B.Sc.(B.Z.C).
5. It is resolved to follow the Model question paper and Blue print of II semester of I B.Sc for the academic year 2019-20.
6. It is resolved to implement certificate course for IV semester of II Year.
7. It is resolved to continue the following teaching & evolution methods for the Academic year 2019-20.
8. Any other matter.

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 II, IV B.Sc , 30 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 candidates 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 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, IV, & VI semester for I,II & III B.Sc.

OF ARTS & SCIENCE (AUTONOMOUS), VUYYURU - 521165, KRISHNS Dt., A.P.

ZOOLOGY

SEMESTER - II w.e.f. - 2018 - 19

Class : I B.Sc

(Code : ZOO -201 C)

No. of Hours per week : 4

Max.Marks: 70

Credits : 3

Title of the Paper : Biology of Chordates

UNIT - I

15hrs.

1.1. Prochordata.

1.1.1. Structure of *Branchiostoma*.

1.1.2. Affinities of Cephalochordata.

1.1.3. Structure and Life History of *Herdmania*.

1.1.4. Significance of Retrogressive metamorphosis.

UNIT - II

15hrs.

2.1.Cyclostomata

2.1. Differences between Petromyzonand *Myxine*.

2.2. Pisces.

2.2.1.*Scoliodon*- External features, Digestive System, Respiratory System, Heart, Brain.

2.2.2. Migration in Fishes.

2.2.3. Dipnoi.

UNIT - III

10hrs.

3.1.Amphibia

3.1.1. *Rana hexadactyla* - External features, Digestive System, Respiratory System, Heart, Brain.

3.1.2.Parental care in Amphibians

3.2.Reptilia

3.2.1. Calotes - External features, Digestive System, Respiratory System, Heart, Brain.

UNIT - IV

12hrs.

4.1.Aves

4.1.1. *Columba livia* - Exoskeleton, Digestive System, Respiratory System, Heart, Brain.

4.1.2.Migration in Birds

4.1.3.Flight adaptations in Birds

UNIT - V

8hrs.

5.1.Mammalia

5.1.1. Differences between Prototheria & Metatheria.

5.1.2. Dentition in Mammals.

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

Semester - II

(Model question paper)

Title of the paper: Biology

of – Chordates.

Code – Zoo-201C 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. Structure of Branchiostoma.
2. Migration in Fishes.
3. Arterial system in Scoliodon.
4. Parental care in Amphibians.
5. Structure of heart in Calotes.
6. Types of feathers in Birds.
7. Flight adaptations in Birds.
8. Prototheria.

Section – B 5 x 10 = 50.

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

9. What is Retrogressive Meta morphosis? Describe this process in life history of Herdmania?
10. Differentiate between Petromyzon and Myxine?
11. Give an account of Dipnoi fishes.?
12. Describe the structure and working of heart in Rana?
13. Give an account of brain of Calotes?
14. Write an essay on migration in birds?
15. Explain the respiratory system of Columba livia?
16. Write an essay on Dentition in mammals?

**A.G. & S.G. Siddhartha Degree College of Arts & Science, Vuyyuru
Semester - II**

Zoology

Guide lines to the

Paper Setter.

Title of the paper: Biology of – Chordates. Code – Zoo-201C

Time: 3hrs.

Max. Marks: 70.

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

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

	Section	UNIT-I (Prochordata)	UNIT-II (Cyclostomata & Pisces)	UNIT-III (Amphibia & Reptilia)	UNIT-IV (Aves)	UNIT-V (Mammalia)
5 Marks Questions	A	1	2	2	2	1
10 Marks Questions	B	1	2	2	2	1
Weightage		15	30	30	30	15

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, VUYURU-521165,
KRISHNA Dt., A.P. (AUTONOMOUS)**

**ZOOLOGY
PRACTICAL - II**

w.e.f. 2018 - 2019

I B.Sc

Code : ZOO - 201P C

Hours / Week: 2

Max. Marks: 50

Credits: 2

External : 25

PAPER TITLE: ANIMAL DIVERSITY OF CHORDATES

Observation of the following slides / specimens / models:

Protochordata: Salient features of Urochordata & Cephalochordata.
Herdmmania, Amphioxus, Amphioxus T.S. through pharynx.

Cyclostomata : General Characters of Cyclostomes.
Petromyzon, Myxine.

Pisces : General Characters & Classification upto Sub- Class level.
Pristis, Torpedo, Channa, Pleuronectes, Hippocampus, Exocoetus, Echeneis & Labeo
Types of Scales: Placoid scale, Cycloid scale, Ctenoid scale.

Amphibia : General Characters & Classification upto Order level.
Ichthyophis, Amblystoma, Siren, Hyla, Rachophorus, Axolotl larva.

Reptilia : General Characters & Classification upto Order level.
Draco, Chamaeleon, Uromastix, Russels viper, Naja, Bungarus, Enhydrina & Testudo.

Aves : General Characters & Classification upto Sub- Class level.
Passer, Psittacula, Bubo, Alcedo, Columba, Corvus, Pavo.

Mammalia : General Characters & Classification upto Sub- Class level.
Ornithorynchus, Tachyglossus, Pteropus, Funambulus, Manis, Loris, Hedgehog.

Osteology : Appendicular skeletons of Varanus, Pigeon, Rabbit – Skull, Fore limbs, Hind limbs .

Demonstration of dissection / dissected / virtual dissection:

1. V, VII, IX, X Cranial nerves of shark / locally available fishes.
2. Arterial system, venous system of Shark / Calotes / Fowl / Rat.
3. Digestive system of fish.

- **Laboratory record work shall be submitted at the time of practical examination.**
- **Compulsory one species to be adopted for demonstration only by the faculty.**

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

**(Animal Diversity of vertebrates) (2 hrs/week)
MODEL QUESTION PAPER -II Code: ZOO-201P**

Credits: 2.

Max.marks: 25m.

Time: 3 hrs.

- | | |
|---|---------|
| 1. Draw neat labeled diagram of IX & X Cranial nerves of Shark. | 7M |
| 2. Spotters: Identify , draw labeled diagram & write notes on
A, B, C, D & E | 5X3=15M |
| 3. Viva. | 3M |
| TOTAL: | 25M. |

Guide lines for the practical Examiners

I. List of dissections : (5marks for diagram & 2 marks for labeling)

1. V, VII, IX, X Cranial nerves of shark/ locally available fishes.
2. Arterial system, venous system of shark/ Calotes/Fowl/Rat.
3. Digestive system of fish.

II. Spotters: 1Mark for identification, 1 Mark for labeled diagram & 1 Mark for notes for each spotter.

Chordata: 4 Specimens / Slides / Models

(Prochordates, Fishes, Amphibians, Reptiles, Birds&Mammals)

Bone -1.

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

w.e.f. 2019-2020.

(2hrs/week).

(Animal Diversity of vertebrates)Code: ZOO-201P.

MODEL QUESTION PAPER -II

Max.marks:25M.

Time: 3hrs.

- | | | |
|-----------------------------------|-------|------|
| 1. Attendance | ----- | 5M. |
| 2. Record | ----- | 10M. |
| 3. Project (Earn while you learn) | ----- | 10M. |

Total ----- 25M.

Title of the Paper: Embryology, Physiology and Ecology.

Unit – I (Embryology)

1.1 Developmental Biology and Embryology

- 1.1.1 Gametogenesis (Spermatogenesis, Oogenesis in mammals)
- 1.1.2 Fertilization
- 1.1.3 Types of eggs
- 1.1.4 Types of cleavages

1.2 Foetal membranes in Chick

1.3 Development - types and functions of Placenta in mammals.

2.1 Physiology - I

- 2.1.1 Elementary study of digestive process.
- 2.1.2 Absorption of digested food.
- 2.1.3 **Respiration** – Structure of mammalian Lung & Mechanism of respiration, transport of oxygen and carbon dioxide
- 2.1.4 **Circulation** - Structure and functioning of mammalian heart, Cardiac cycle.
- 2.1.5 **Excretion** - Structure of nephron, urine formation, counter current mechanism.

Unit – III (Physiology - II)

3.1 Physiology - II

- 3.1.1 Structure & functional properties of Nerve Cell; Production & propagation of nerve Impulse. Synaptic transmission.
- 3.1.2 Muscle contraction - Ultra structure of muscle fibre, molecular and chemical basis of muscle Contraction.
- 3.1.3 Endocrine glands - Structure, secretions and the functions (of hormones) of Pituitary, Thyroid, parathyroid, adrenal glands and pancreas.
- 3.1.4 Hormonal control of reproduction in Mammals.

Unit – IV(Ecology – I)

4.1Ecology-I

- 4.1.1 Abiotic factors of Ecosystem – Temperature & Light.
- 4.1.2 Nutrient cycles - Nitrogen, Carbon and Phosphorus.
- 4.1.3 Energy flow in ecosystem.

Unit – V (Ecology – II & Zoogeography)

5.1 Ecology - II.

- 5.1.1. Community interactions - Mutualism, commensalism, parasitism.
- 5.1.2. Ecological succession.

5.2 Zoogeography 5.2.1 5.2.1. Study of physical and faunal peculiarities of Oriental, Australian and Ethiopian regions.

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

Semester – IV

Time: 3hrs.

Max. Marks: 70.

Section – A4 x 5 = 20M.

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

- 1.Types of eggs.
- 2.Foetal membranes.
- 3.Counter current mechanism.
- 4.Synaptic transmission.
5. Pancreas.
- 6.Energy flow in Ecosystem.
7. Mutualism.
- 8.Parasitism.

Section – B5 x 10 =50M.

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

- 9.Describe the process of Fertilization.
- 10.Write an essay on placenta.
- 11.Explain the mechanism of transport of oxygen and Carbon –dioxide in blood of mammals.
- 12.Describe the structure and working of mammalian heart.
- 13.Explain the structure and functions of pituitary gland.
- 14.Describe the Carbon and Nitrogen cycle.
- 15.Describe the process of Ecological succession in a pond.
- 16.Give an account of the fauna of oriental region.

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

Semester - IV

Zoology

Guide lines to the Paper Setter.

Title of the paper: Embryology,

Physiology and Ecology.

Code – Zoo-401C

Time: 3hrs.

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 Embryology	UNIT-II Physiology-I	UNIT-III (Physiology -II)	UNIT-IV Ecology-I	UNIT-V (EcologyII, Zoogeogra phy)
5 Marks Questions	A	2	1	2	1	2
10 Marks Questions	B	2	2	1	1	2
Weightage		30	25	20	15	30

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

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

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KRISHNA Dt., A.P. (AUTONOMOUS)

ZOOLOGY PRACTICAL SYLLABUS
SEMESTER - IV

PAPER – IV

w.e.f : 2019 - 20

Periods: 24Max. Marks: 50

Paper Title: Embryology,Physiology & Ecology Paper Code : 401P

I. Embryology

1. Study of T.S. of testis, ovary of a mammal.
2. Study of different stages of cleavages (2, 4, 8 cell stages).
3. Study of chick embryo of 18 hours, 24 hours, 33 hours and 48 hours of incubation.

II. Physiology

1. Qualitative tests for identification of carbohydrates, proteins and fats.
2. Qualitative tests for identification of ammonia, urea and uric acid.
3. Study of activity of salivary amylase under optimum conditions.
4. Study of prepared slides of T.S. of duodenum, liver, lung, kidney, spinal cord, bone and cartilage.

III. Ecology

1. Determination of pH of given sample.
2. Estimation of dissolved oxygen of given sample.
3. Estimation of total alkalinity of given sample.
4. Estimation of salinity of given sample.

A. G & S. G. S. DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU 521165, KRISHNA Dt., A.P.
(AUTONOMOUS)
PAPER – IV

(Embryology, Physiology & Ecology)

Model question paper (External)w.e.f.2019-20.

Max.Marks: 25 M.

Paper Code: ZOO-401C

I.Embryology:

1. Identify, draw neat labeled diagram & comment on . $1\frac{1}{2} \times 2 = 3M.$ **A & B**

II. Physiology

2. Identify, draw neat labeled diagram & comment on . $1\frac{1}{2} \times 2 = 3M.$ **A & B**
3. Identify the organic substances in the given samples A & B, each with two tests. 4x $1\frac{1}{2}$ = 6M.
(Sample A- $2 \times 2\frac{1}{2}$ =5 Marks & sample B -- $2 \times 2\frac{1}{2}$ =5 Marks)
4. Identify the Excretory products in the given samples A & B, each with two tests. 4x $1\frac{1}{2}$ = 6M.
(Sample A- $2 \times 2\frac{1}{2}$ =5 Marks & sample B -- $2 \times 2\frac{1}{2}$ =5 Marks)

III. Ecology:

5. Determine the P^H of given sample. 1x2=2M.
6. Estimate the dissolved oxygen in the given sample. 1x5=5M.

A. G.& S.G. SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU-521165
ZOOLOGY PRACTICAL -IV
(INTERNAL)

(Embryology,Physiology &Ecology) w .e.f. 2019-2020.

(2hrs/week).

Code: ZOO-401P.

Max.marks:25M

Time: 3hrs.

- | | | |
|---------------|-------|------|
| 1. Attendance | ----- | 5M. |
| 2. Record | ----- | 10M. |
| 3. Assignment | ----- | 10M. |

Total ----- 25M.

SEMESTER - VI

ZOOLOGY –ELECTIVE PAPER: VII-(A)

Class IIIB.Sc

w.e.f.- 2017- 18

Paper Code : ZOO -601C

60 Hrs.

Paper code: Zoo-601GEEexternal: 75

25

Immunology.

Objective of the course: To facilitate students to understand the role of immune system in the body, cells and organs of immune system, their structures and functioning.

Course outcomes:

- ❖ Students grow in understanding of immune system, to improve their immunity and to protect them from pathogens.
- ❖ They identify their blood groups, their compatibility and the need to donate blood to save life.
- ❖ Students identify the classes, structures and functions of antibodies, antigen –antibody reactions.
- ❖ This study enables students to take care of themselves and take timely precautions against various disease.
- ❖ They identify the cure of different diseases through various vaccines, the instruments involved in identification of immune reactions etc.

Unit I:

1.1 Overview of Immune system

1.1.1 Introduction to basic concepts in Immunology.

1.1.2 Innate and adaptive immunity

1.2 Cells and organs of Immune system

1.2.1 Cells of immune system

1.2.2 Organs of immune system

Unit II:

2.1 Antigens

2.1.1 Basic properties of antigens

2.1.2 B and T cell epitopes, haptens and adjuvants

2.1.3 Factors influencing immunogenicity

Unit - III :

3.1 Antibodies

3.1.1 Structure of an antibody

3.1.2 Classes and functions of antibodies

3.1.3 Antigen and antibody interactions.

3.1.4 Monoclonal antibodies and their production.

Unit - IV

4.1 Working of an Immune system

4.1.1 Structure and functions of major histocompatibility complexes

4.1.2 Exogenous and Endogenous pathways of antigen presentation and processing

4.1.3 Basic properties and functions of mediator molecules. (cytokines, interferons and complement proteins).

4.1.4 Mechanisms of humoral and cell mediated immunities

Unit - IV

5.1 Immune system in health and disease

5.1.1 Classification and brief description of various types of hyper sensitivities

5.1.2 Introduction to concepts of autoimmunity and immunodeficiency

5.2 Vaccines

5.2.1 General introduction to vaccines

5.2.2 Types of vaccines

KRISHNA Dt.,A.P. (AUTONOMOUS)
SEMESTER-VI (Model Question paper)

Paper Title: Immunology

Paper Code:ZOO-601GE

SECTION-A

Answer **any five** questions out of eight in Part - A. Each question carries five marks. **5 X 5 =**

1. Active immunity
2. Monoclonal antibodies.
3. TCell Epitope
4. Structure of antibody.
5. Functions of major histocompatibility complexes (MHC)
6. Humoral immunity.
7. Causes of autoimmune diseases.
8. BCG Vaccine .

Part – B

Answer **any five** questions out of eight in Part – B. Each question carries ten marks. **5 X 10 = 50**

9. Give an account of innate immunity.
10. Write an essay on primary lymphoid organs.
11. Discuss about the basic properties of Antigen.
12. Write an essay on immunogenicity.
13. Describe about different types of immunoglobulins.
14. Give an account of basic properties and functions of Cytokines.
15. Define Hypersensitivity . Explain it in detail.
16. Explain different types of vaccines.

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

ZOOLOGY PRACTICAL SYLLABUS

Period: 24 PAPERS – VI
Max.Marks:50
Credits: 2
Paper Code: ZOO-601GE (P)
Paper Title: Immunology.

1. Demonstration of lymphoid organs (as per UGC guidelines).
2. Histological study of spleen, thymus and lymph nodes (through prepared slides).
3. Blood group determination.
4. Demonstration of
 - a. ELISA
 - b. Immuno-electrophoresis

REFERENCES BOOKS

William F. Ganong, A Review of Medical Physiology, 22 ed, McGraw Hill, 2005
Sherwood, Klandrof, Yanc, Human Physiology, Thompson Brooks/Coole, 2005.
Knut Schmidt-Nielson, Animal Physiology, 5th ed, Cambridge Low Price Edition.
Richard A. Glodsby, Thomas J Kind, Barbara A. Osborne, Janis Kuby, Immunology, 5th ed,
Freeman and Co. New York
Ivan Roitt, Immunology, 4th ed, JohanthanBrostoff, Moshy, London.
Thomas C. Chung, General Parasitology, Hardcourt Brace and Co ltd. Asia. New Delhi.
Gerard D. Schmidt and Larry S Roberts, Foundations of Parasitology, McGraw Hill
Kindt, T. J., Goldsby, R. A., Osborne, B. A., Kuby, J. (2006). VI Edition. Immunology. W.H.
Freeman and Company.
Delves, P. J., Martin, S. J., Burton, D. R., Roitt, I.M. (2006). XI Edition. Roitt's Essential
Immunology, Blackwell Publishing.

SEMESTER-VI
ZOOLOGY ELECTIVE PAPER-VII (A)

Time: 3 hrs

Max.Marks:75

Guide lines to the paper setter
Paper Title:Immunology. Paper Code: ZOO-601GE

Note: 1. Answer **any five** questions out of eight in Part-A. Each question carries five marks.5 X 5= 25M.

2. Answer any **five** questions out of eight in Part-B. Each question carries 10 marks5 X 10= 50M.

	PART	Unit – I	Unit – II	Unit – III	Unit – IV	Unit – V
5 Marks Questions	A	1	1	2	2	2
10 Marks Questions	B	2	2	1	1	2
Weightage		25	25	20	20	30

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

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**A.G& S. G.S.DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU - 521165,
KRISHNA Dt., A.P. (AUTONOMOUS)**
(Immunology) **Max.marks:25m**

Model Question Paper (External) Paper Code: ZOO-601GE (P)
Practical - V

1. Demonstration of lymphoid organs (as per UGC guidelines) 5m
 2. Blood group determination 5m
 3. Study the following techniques given on photographs & Write notes on. 2x5=10m
A & B
 4. ELISA & Immunoelectrophoresis (demonstration) on site or of site demonstration. 5m
- Total: 25m.

Guide lines for the Practical Examiners.

1. Demonstration of lymphoid organs
(5 marks for Procedure)
2. Blood group determination.
(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. ELISA (demonstration) on site or of site demonstration.

(5 marks for ELISA demonstration)

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KRISHNA Dt., A.P. (AUTONOMOUS)

(Immunology) *Max. Marks: 25*
Model Question Paper (Internal) *Paper Code: ZOO-601GE (P)*
Practical - V

1. Attendance	--	5 M
2. Record	--	10M
3. Assignments	--	10M
Total	--	25M

**ADUSUMILLI GOPALAKRISHNAIAH & SUGARCANE GROWERS SIDDHARTHA
DEGREE COLLEGE OF ARTS & SCIENCE, VUYYURU- 521165, KRISHNA Dt., A.P.
(AUTONOMOUS)**

SEMESTER - VI (CBCS)

Class: III B.Sc (B.Z.C)

(Cluster Elective Paper: VIII-B-1)

w.e.f. –2017-18

60 Hrs(4hrs/ week)

Paper Code : ZOO-602CE

Credits : 3

External : 75

Title of the Paper: Principles of Aquaculture.

Internal: 25

Objective of the course: To introduce students into aquaculture practices

Course outcomes:

- ❖ Students get wider knowledge on aquaculture
- ❖ The study of students Types of Aquaculture ,culture systems and Culture Practices
- ❖ They learn about design and construction of aqua farms(pond formation)
- ❖ They study various economically important species
- ❖ Students get acquainted with sea weed and their benefits.

UNIT –I

- 1.1 Introduction / Basics of Aquaculture: - Definition, Significance and History of Aquaculture
- 1.2 Present status of Aquaculture – Global and National scenario
- 1.3 Major cultivable species for aquaculture: freshwater, brackish water and marine.
- 1.4 Criteria for the selection of species for culture

Unit – II

- 2.1 Types of Aquaculture:-** Freshwater, Brackishwater and Marine
- 2.2 Concept of Monoculture, Polyculture, Composite culture, Monosex culture and Integrated fish farming
- 2.2 Culture systems :-** Ponds, Raceways, Cages, Pens, Rafts and water recirculating systems
- 2.3 Culture practices :-** Traditional, extensive, modified extensive, semi-intensive and intensive cultures of Fish and shrimp.

Unit – III

- 3.1 Design and construction of aqua farms :-**Criteria for the selection of site for freshwater and brackish water pond farms, Design and construction of fish and shrimp farms
- 3.2 Seed resources :-** Natural seed resources and Procurement of seed for stocking: Carp and shrimp
- 3.3 Nutrition and feeds :-** Nutritional requirements of a cultivable fish and shellfish
- 3.4 Natural food and Artificial feeds and their importance in fish and shrimp culture

Unit – IV

- 4.1 Management of carp culture ponds:-** Culture of Indian major carps: Pre-stocking management – Dewatering, drying, Predators, weeds and algal blooms and their control, Liming and Fertilization; Stocking management – Stocking density and stocking; Post-stocking Management – Feeding, waterquality, growth and health care; and harvesting of ponds
- 4.2 Culture of giant freshwater prawn, *Macrobrachium rosenbergii***

Unit – V

- 5.1 Culture of shrimp (*Penaeus monodon* or *Litopenaeus vannamei*)**
- 5.2 Culture of pearl oysters**
- 5.3 Culture of seaweeds-**species cultured, culture techniques, important by-products, prospects
- 5.4 Culture of ornamental fishes –** Setting up and maintenance of aquarium; and breeding

SEMESTER-VI (Model Question paper)
Cluster Electives paper –VIII-B-1

Time: 3 hrs

Max.Marks:75

Paper Title: Principles of Aquaculture.

Paper Code: ZOO-602CE

Part - A

Answer **any five** questions out of eight in Part - A. Each question carries five marks. **5 X 5 = 25**

- 1.Aquaculture History
- 2.NationalStatus of Aquaculture.
- 3.Monoculture.
- 4.Cage culture
- 5.Criteria for selection of site for fresh water culture.
- 6.Seed resources of carp fish.
7. Pre- Stocking Management of carps.
8. Byproducts of sea weeds.

Part – B

Answer **any five** questions out of eight in Part – B. Each question carries Ten marks. **5 X 10 = 50**

- 9.Describe any three cultivable species of fresh water ponds.
- 10.Write the criteria for the selection of species for culture.
- 11.Write an essay on water recirculated system.
- 12.Write an essay on types of Aquaculture which you have studied.
- 13.Give an account of design and construction of Aquaculture.
- 14.Explain natural and artificial feeds and their importance in fish feeding.
- 15.Give an account of post- stock Management of carps.
- 16.Give an account of culture of penaeus monodon.

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

**SEMESTER-VI
Cluster Electives paper –VIII-B-1**

**Guide lines to the paper setter Time: 3 hrs
Max.Marks:75**

Paper Title:

Principles of Aquaculture.

Paper Code: ZOO-602CE

Note: 1. Answer **any five** questions out of eight in Part-A. Each question carries five marks. 5 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	2	1	1
10Marks Questions	B	2	2	2	1	1
Weightage		30	30	30	15	15

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

SEMESTER - VI (CBCS)

w.e.f. - 2017 - 18

Class: III B.Sc (B.Z.C)

(Cluster Elective Paper: VIII-B-2)

60 Hrs. (4hrs/Week)

Paper Code : ZOO-603CE

Credits : 3

External : 75

Title of the Paper: Aquaculture

Management.

Objectives of the course: To instruct students on aquaculture managerial skills.

Course out comes:

- ❖ Students get know about breeding technology of fishes, Hatching and hatching methodology.
- ❖ Students learn to analyse the quality of water and soil.
- ❖ They are trained on feed storage, Feeding strategies: Feeding devices, feeding schedules and ration size.
- ❖ They gain knowledge on diseases of fish and shrimp and the strategies involved in marketing.
- ❖ They study economics and Marketing , **Fisheries Extension and** important of fish genetics.

Unit – I

1.1 Breeding and Hatchery Management:- Bundh Breeding and Induced breeding of carp by Hypophysation;
and Use of synthetic hormones.

1.2 Types of fish hatcheries; Hatchery management of Indian major carps

1.3 Breeding and Hatchery management of *Penaeus monodon*/ *Litopenaeus vannamei*

1.4 Breeding and Hatchery management of giant freshwater prawn.

Unit – II

2.1 Water quality Management:- Water quality and soil characteristics suitable for fish and shrimp culture

2.2 Identification of oxygen depletion problems and control mechanisms in culture ponds

2.3 Liming materials, Organic manures and Inorganic fertilizers commonly used and Their implications in fish

ponds

Unit – III

3.1 Feed Management :- Live Foods and their role in shrimp larval nutrition.

3.2 Supplementary feeds: Principal foods in artificial diets; Types of feeds; Feed additives and Preservatives;

role of probiotics. Feed formulation and manufacturing; Feed storage

3.3 Feeding strategies: Feeding devices, feeding schedules and ration size; Feed evaluation- feed conversion efficiencies and ratios

Unit – IV

4.1 Disease Management :- Principles of disease diagnosis and health management;

4.2 Prophylaxis, Hygiene and Therapy of fish diseases

4.3 Specific and non-specific defense systems in fish; Fish immunization and Vaccination

4.4 Etiology, Symptoms, prophylaxis and therapy of common fish diseases in fish ponds

4.5 Etiology, Symptoms, prophylaxis and therapy of common shrimp diseases in shrimp ponds

Unit – V

5.1 Economics and Marketing :- Principles of aquaculture economics – variable costs, cost-benefit analysis ,Fish marketing methods in India; Basic concepts in demand and price analysis.

5.2 Fisheries Extension : Fisheries Training and Education in India; Role of extension in community development.

5.3 Fish Genetics Genetic improvement of fish stocks – Hybridization of fish.

Gynogenesis, Androgenesis, Polyploidy, Transgenic fish, Cryopreservation of gametes,

SEMESTER-VI (Model Question paper)
Cluster Electives paper –VIII-B-2

Time: 3 hrs

Max.Marks:75

Paper Title: Aquaculture Management. Paper Code: ZOO-603CE

Part - A

1. Answer **any five** questions out of eight in Part - A. Each question carries five marks. **5 X 5 = 25**

1. Bundh Breeding.
2. Types of hatcheries.
3. Liming Material.
4. Organic Manures.
5. Feed evaluation.
6. Supplementary feeds.
7. Symptoms of fish diseases
8. Gynogenesis.

Part – B

2. Answer **any five** questions out of eight in Part – B. Each question carries ten marks. **5 X 10 = 50**

9. Describe the induced breeding of carps by Hypophyston
10. Give an account of breeding and Hatchery management of panaeus monodon
11. Describe the water quality characteristics of fish ponds.
12. Describe the identification of oxygen depletion problems and control mechanisms in culture ponds.
13. Give an account of Feed formulation and manufacturing.
14. Write an essay on feeding strategies.
15. Describe symptoms therapy and prophylaxis of any three diseases related to prawn.
16. Write an essay on Transgenic fish.

SEMESTER-VI
Cluster Electives paper –VIII-B-2

Guide lines to the paper setter Time: 3 hrs
Max.Marks:75

Paper

Title:Aquaculture Management **Paper Code:** ZOO-603CE

*Note:*1. Answer **any five** questions out of eight in Part-A. Each question carries five marks. 5 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	1	2	1	2
10 Marks Questions	B	2	2	2	1	1
Weightage		30	25	30	15	20

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

SEMESTER - VI (CBCS)

Class: III B.Sc (B.Z.C)

(Cluster Elective Paper: VIII-B-3)

w.e.f. - 2017 - 1860

Hrs (4hrs/Week)

Paper Code: ZOO-604CE

Credits: 3

External: 75

Internal: 25

of the Paper: Postharvest Technology.

Objective of the course: To prepare students to become future aqua culturists.

Course out comes:

- ❖ Students are given techniques to handle fresh fish, storage, preservation and transport.
- ❖ They learn to extract maximum from fish and produce fish products.
- ❖ They can earn while they learn.
- ❖ They are taught rules and regulations pertaining to quality control.
- ❖ Students get know about Quality Assurance, Management and Certification

Unit – I

1.1 Handling and Principles of fish Preservation :- Handling of fresh fish, storage and transport of fresh fish,

post mortem changes (Rigor mortis and spoilage), spoilage in marine fish and freshwater fish.

1.2 Principles of preservation– cleaning, lowering of temperature, rising of temperature, use of salt, use of fish preservatives, exposure to low radiation.

Unit – II

2.1 Methods of fish Preservation :- Traditional methods - sun drying, salt curing, pickling and smoking.

2.1.2 Advanced methods – chilling or icing, refrigerated sea water, freezing, canning, Irradiation and Accelerated Freeze drying (AFD).

Unit – III

3.1 Processing and preservation of fish and fish by-products :- Fish products – fish minced meat, fish meal, fish oil, fish liquid (ensilage), fish protein concentrate, fish chowder, fish cake, fish sauce, fish salads, fish powder, petfood from trash fish, fish manure.

3.2 Fish by-products – fish glue, ising glass, chitosan, pearl essence, shark fins, fish leather and fish maws.

3.3 Seaweed Products :- Preparation of agar, algin and carrageen. Use of seaweeds as food for human consumption.

Unit – IV

4.1 Sanitation and Quality control :- Sanitation in processing plants - Environmental hygiene and Personal hygiene in processing plants.

4.2 Quality Control of fish and fishery products – pre-processing control, control during processing and control after processing.

4.3 Regulatory affairs in industries

Unit – V

5.1 Quality Assurance, Management and Certification :- Seafood Quality Assurance and Systems: Good Manufacturing Practices (GMPs); Good Laboratory Practices (GLPs); Standard Operating Procedures (SOPs); Concept of Hazard Analysis and Critical Control Points (HACCP) in seafood safety.

5.2 National and International standards – ISO 9000: 2000 Series of Quality Assurance System.

SEMESTER-VI (Model Question paper)

Cluster Electives paper –VIII-B-3

Time: 3 hrs Max.Marks:75

Paper Title: Postharvest Technology. Paper Code: ZOO-604CE

Part - A

Answer **any five** questions out of eight in Part - A. Each question carries five marks. **5 X 5 = 25**

1. Storage of fish.
2. Exposure of fish to low radiation of gamma rays.
3. Accelerated freeze drying.
4. Pickling of fish
5. Fish oils.
6. Fish meal.
7. Pre- processing control of fishery products.
8. Codex Alimentarius.

Part – B

Answer **any five** questions out of eight in Part – B. Each question carries ten marks. **5 X 10 = 50**

9. Write the principles of fish preservation.
10. Write about spoilage in marine fish and fresh water fish.
11. Write about the Traditional methods of fish preservation like sun drying ,salt curing and smoking .
12. Give an account of advanced methods of preservation like chilling, freezing & canning.
13. Write an essay on any five fish byproducts.
14. Explain how sea weeds are useful in disease treatment and preparation of therapeutic drug.
15. Write an essay on environmental hygiene in processing plants.
16. Explain about the concept of hazard analysis & critical control points in sea food safety.

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**SEMESTER-VI
Cluster Electives paper –VIII-B-3**

**Guide lines to the paper setter Time: 3 hrs
Max.Marks:75**

Paper Title:Postharvest Technology.**Paper Code: ZOO-604CE**

*Note:*1. Answer **any five** questions out of eight in Part-A. Each question carries five marks.5 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	2	1	1
10 Marks Questions	B	2	2	2	1	1
Weightage		30	30	30	15	15

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

Guide lines for the Practical Examiners. w.e.f. 2019–20.

1. Spotters: Identify and comment on A, B, C & D (Charts / Photographs). 4X2=8m
(Identification - $\frac{1}{2}$ mark, neat labeled diagram and Comments - $1\frac{1}{2}$ m)
2. Identify and comment on A & B (Charts / Photographs) 2x2=4m
(Identification - $\frac{1}{2}$ mark & Comments - $1\frac{1}{2}$ m)
3. External examination of the diseased fish –diagnostic features and procedure. 3m
(3 marks for Procedure)
4. Determination of dosages of chemicals and drugs for treating common diseases 1x3= 3m
5. Identification and study of common zooplankton, aquatic insects and aquatic weeds. 2x2=4m
(Identification - $\frac{1}{2}$ mark & Comments - $1\frac{1}{2}$ m)
6. Salinity in the pond water sample. 3m

Practical - VI w.e.f. 2019–20.

(Principles of Aquaculture)

Max. Marks: 25

Model Question Paper (Internal)

Code: ZOO-C-I

1. Attendance	--	5 M
2. Record	--	10M
3. Assignments	--	10M
Total	--	25M

ZOOLOGY PRACTICAL

Credits:2 Periods : 24

Max.Marks:50

Paper Title : Aquaculture (*Aquaculture management*)

Code : ZOO-C-II

Nutrition

1. Identification and study of Live food organisms – Any five
2. Formulation and preparation of a balanced fish feed
3. Estimation of Proximate composition of aquaculture feeds – Proteins, carbohydrates, lipids, moisture, ash content.
4. Gut content analysis to study artificial and natural food intake.

Post harvest Technology

1. Evaluation of fish/ fishery products for organoleptic, chemical and microbial quality.
2. Preparation of dried, cured and fermented fish products, examination of salt, protein, moisture in dried / cured products, examination of spoilage of dried / cured fish products, marinades, pickles, sauce.
3. Preparation of isinglass, collagen and chitosan from shrimp and crab shell. ?
4. Developing flow charts and exercises in identification of hazards – preparation of hazard analysis worksheet, plan form and corrective action procedures in processing of fish.

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Practical - VI

*(Aquaculture management)
Model Question Paper (External)*

*w.e.f. 2019 - 20
Max. Marks: 25
Paper Code: ZOO-C-II*

I. Nutrition:

1. Identification and study of Live food organisms- A & B 2X2=4m
2. Estimation of Proximate composition of aquaculture feeds – A & B 2x2^{1/2}=5m

II. Post harvest Technology:

3. Curd and fermented fish products (Procedure) 5m
 4. Preparation of isinglass, collagen and chitosan from shrimp and crab shell. 5m
 5. Identification of hazards & Comment on A & B. 2x3=6m
- Total-----25m

Guide lines for the Practical Examiners.

w.e.f. 2019 - 20

Max. Marks: 25

1. Identify and comment on A & B (Charts / Photographs).
(Identification - $\frac{1}{2}$ mark and Comments - $1\frac{1}{2}$ m)
2. Estimation of Proximate composition of aquaculture feeds – A & B
(Composition –A- $2\frac{1}{2}$ Composition – B- $2\frac{1}{2}$)
3. Curd and fermented fish products (Procedure)
(5 marks for Procedure)
4. Preparation of isinglass, collagen and chitosan from shrimp and crab shell.
(If any one Procedure – 5 marks)
5. Identification of hazards & Comment on A & B
(Identification - 1 mark & Comments- 2m)

Practical - VI w.e.f. 2019–20.

(Aquaculture management)

Max. Marks: 25

Model Question Paper (Internal) Code: ZOO-C-II

1. Attendance	--	5 M
2. Record	--	10M
3. Assignments	--	10M
	Total --	25M

ZOOLOGY PRACTICAL

Credits:2 Periods : 24

Max.Marks:50

Paper Title : **Aquaculture (Post-harvest Technology)** Code : **ZOO-C-III (PROJECT)**

Project Work

Visit to a fish breeding centre / fish farms and submit a project report

Or

Visit to a feed manufacturing unit and submit a project report

Or

Visit to a shrimp hatchery / shrimp farms and submit a project report

Or

Visit to a shrimp processing unit and submit a project report

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Practical - VI w.e.f. 2019–20.

(Post-harvest Technology) Max. Marks: 25

Model Question Paper (Internal) Code: ZOO-C-III (PROJECT)

1. Attendance	--	5 M
2. Project Record – (Fish form)	--	10M
3. Project Record – (Fish form)	--	10M
Total	--	25M
