

**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 COMPUTER SCIENCE


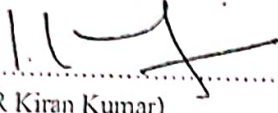
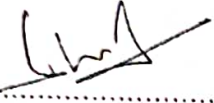
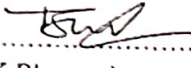

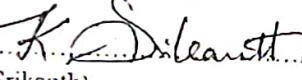
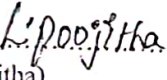

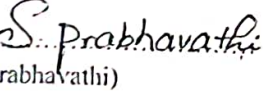
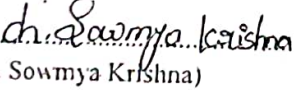
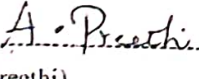
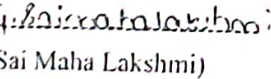
MINUTES OF BOARD OF STUDIES

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

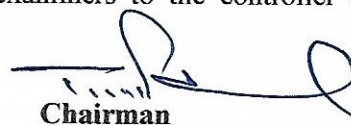
- Members Present:
- 1)  Chairman
(T.Naga PrasadaRao) Head, Department of Computer Science
AG & SG Siddhartha Degree College of Arts & Science,
Vuyyuru-521165
 - 2)  University
(Dr. R Kiran Kumar) Nominee Professor,
Dept of Computer Science,
Krishna University, Machilipatnam.
 - 3)  Academic
(Dr. Suresh Sundaradasu) Council Nominee Head, Department of Computer Science & Engineering,
Dhanekula Institute of Engineering & Technology,
Ganguru, JNTU(K), Vijayawada.
 - 4)  Academic
(Dr. K Bhagvan) Council Nominee Professor, Department of Computer Science
K.B.N College,
Vijayawada.
 - 5)  Industrial
(R. Sowjanya) Excerpt .Net Developer,
Mavensoft Systems Private limited
Madaapur, Hyderabad.
 - 6)  Member
(K Srikanth) Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165.
 - 7)  Member
(L.Pujitha) Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
 - 8)  Member
(A. Sravani) Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
 - 9)  Member
(S.Prabhavathi) Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
 - 10)  Member
(Ch. Sowmya Krishna) Lecturer in Computer Science, AG & SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
 - 11)  Member
(A.Preethi) Student in M.Sc. Computer Science, AG& SG Siddhartha
Degree College of Arts & Science, Vuyyuru-521165
 - 12)  Member
(G. Sai Maha Lakshmi) 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 APSICHE 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 APSICHE 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.)
SEMESTER – II	PAPER – II	Max. Marks 70	Pass Marks 28
<u>Syllabus</u>	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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COMPUTER SCIENCE	CSC-201c	2019-'20	B.Sc.(MPC's, MCCS)
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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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COMPUTER SCIENCE	CCSC-203C	2019-20	B.Com.(C.A)
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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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COMPUTER SCIENCE	CCSC-203C	2019-'20	B.Com. (C.A)
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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)
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.
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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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COMPUTER SCIENCE	ICT-I-201	2019-'20	B.A, B.Com., B.Sc.
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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COMPUTER SCIENCE	CSC-401C	2019-'20	B.Sc.(MPCs., MCCs.)
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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?

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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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COMPUTER SCIENCE	CSC-401P	2019-'20	B.Sc.(MPCs., MCCs.)
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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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COMPUTER SCIENCE	CCSC-403C	2019-'20	B.Com.(C.A)
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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?

(With Effect from Academic Year 2018-'19)

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

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’**

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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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COMPUTER SCIENCE	CSC PROJ-602 P	2019-'20	B.Sc.(MPCs)
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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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COMPUTER SCIENCE	COM-CSC-605	2019-20	B.Com (C.A)
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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COMPUTER SCIENCE	CCSC-605CE	2019-20	B.Com (C.A)
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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COMPUTER SCIENCE	COMCSC-605P	2019-20	B.Com.(C.A.)
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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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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 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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COMPUTER SCIENCE	CCSC-607CE	2019-20	B.Com (C.A)
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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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COMPUTER SCIENCE	COM-CSC-607	2019-20	B.Com (C.A)
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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?

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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:

- Out of maximum 100 marks in each paper, 25 marks shall be allocated for internal assessment.
- 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:

- The maximum marks for 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 and the practical papers are conducted at the end of every Semester for II & III B.Sc. (MPCs) only.
- 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.
- 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