

Sri Y.N.College (Autonomous): Narsapur
(Affiliated to Adikavi Nannaya University)
Thrice Accredited by NAAC at 'A' Grade
Recognized by UGC as "College with Potential for Excellence"
West Godavari District, Andhra Pradesh
Ph.no: 08814-273246, Cell No: 99490-92581
sriynmcollege@rediffmail.com, sriynmcollege1@gmail.com

Dept. of Computer Science(UG)
(Board of Studies Meeting held on 29-10-2021)



Department of Computer Science

Sri Y.N.College (Autonomous): Narsapur

(Affiliated to Adikavi Nannaya University)

Thrice Accredited by NAAC at 'A' Grade

Recognized by UGC as 'College with Potential for Excellence'

NARASAPUR-534275, W.G.Dist. AP

Board of studies meeting of Computer Science held on 29-10-2021 at 11.00 A.M through Zoom app.

Members:

1. **Sri B.China Veeraswamy**, M.Sc., (C.S.),
Chairman & In-Charge of Dept.
2. **Smt. G.Sowjanya**, M.Sc., (C.S.),
Lecturer in Computer Science
3. **Sub.Lt(NCC) Y.N.V.V.R.Rama Rao**, M.Sc.,(C.S.),
Lecturer in Computer Science
4. **Sri Ch.S.V.Ravi Kumar**, M.C.A.,
Lecturer in Computer Science
5. **Kum.P.P.S.Lakshmi**, M.C.A.,
Lecturer in Computer Science
6. **Kum. A.Naga Lakshmi**, M.C.A.,
Lecturer in Computer Science
7. **Smt. K.Sireesha**, MCA.,
Lecturer in Computer Science
8. **Kum. K.Tulasi Ratna Kumari**, MCA.,
Lecturer in Computer Science

B. China Veeraswamy

G. Sowjanya

Y.N.V.V.R.Rama Rao

Ravi

P.P.S.Lakshmi

A. Nagalakshmi

K.Sireesha

K.Tulasi

University Representative:

9. **Sri D.S.V.Suryanarayana**, M.Tech.,
Head, Dept. of Computer Science
MVNJS & RVR College of Arts and Science, E.G.Dt., Cell No: 96660-35667

Subject Experts:

10. **Sri K.Trinadha Ravi Kumar**, M.Sc., M.Tech.,
Head, Dept. of Computer Science (UG)
SVKP & Dr.K.S.Raju Arts & Science College (A), Penugonda,
W.G.Dist., Cellno: 94410-20934, 94410-90468
11. **Sri P.Sirish Kumar**, M.C.A, M.Tech.,
Head, Dept of Computer Science,
D.N.R. College (A), Bhimavaram, W.G.Dt., Cell no: 89193-34795

Alumni Member:

12. **Sri P.S.N.V. Satyanarayana**, M.C.A., M.Tech.,
Digital Assistant, Former Asst.Professor in CSE
Village Secretariat, Ramannapalem , W.G.Dt., 534275, Cell no: 79896-40560

Representative from Industry:

13. **Sri Ratnala RamaKrishna**, M.Sc.,
Architect - Technology
Virtuasa Consulting Services Pvt. Ltd.,
Hyderabad - 500032, Cell No: 93463-20386

Agenda:

1. To prepare the syllabi and model question papers for the degree I, II and III years for the academic year 2021-22 by making appropriate modifications to the University syllabus.
2. To discuss the modalities for conducting the **Social Immersion Programme** at the end of the 1st year degree.
3. To discuss the modalities and topics for conducting **seminars/workshops**.
4. To discuss the issue of **online courses** to be done by the students and staff.
5. To discuss the **staff publications** in the UGC recognised journals.
6. To discuss the issue of getting **functional MOUs with the industry**.
7. To discuss the feasibility **of developing collaborations** with other colleges.
8. To evolve a plan of action for the **Consultancy activity**.
9. Any other matters with permission of the chair.

A. Nagaraj Reddy

G. Srinivas

P. Srinivas

Ravi

M.

M. Zhi

APPROVED

B. Chinnappa

**CHAIRMAN
BOARD OF STUDIES**

**DEPARTMENT OF COMPUTER SCIENCE
SRI Y.N. COLLEGE (AUTONOMOUS)
(NAAC ACCREDITED 'A' GRADE COLLEGE)
NARSAPUR - 534 275, W.G.D.,**

Resolutions:

1.
 - a) It is resolved to adopt and implement new B.Sc., Computer Science syllabus as prescribed by APSCHE and Adikavi Nannaya University, Rajamahendravaram w.e.f 2020-21 and ratified the minutes of department meeting held on 25-01-2021 in the Computer Science department.
 - b) Approved the modified syllabus of I B.Sc., Computer Science (Theory, Practical and Model Question paper) Semester-I, Paper-I i.e., "**Problem Solving in 'C'**" and Semester-II, Paper-II i.e., "**Data Structures using 'C'**" w.e.f. academic year 2020-21 as Prescribed by the APSCHE and ANUR.
 - c) It is resolved to approve II B.Sc., Computer Science syllabus with more than 20% modifications in the Semester-III, Paper-III i.e., "**Database Management System**", and Semester-IV, Paper-IV i.e., "**Object Oriented Programming using Java**", Paper-V "**OPERATING SYSTEM**" w.e.f. academic year 2021-22 as Prescribed by APSCHE and ANUR.
 - d) It is resolved to continue the III B.Sc., Computer Science syllabus, Semester-V, Paper-V i.e., "**Database Management System**" and Paper-VI i.e., "**Software Engineering**" w.e.f. the academic year 2017-18, as Prescribed by APSCHE and ANUR.
 - e) It is also resolved that, In the VI Semester the student has to choose one paper in **Elective-I** (i.e., VII (A) or VII (B) or VII(C)). Students can choose either Cluster-A or Cluster-B or Cluster-C (i.e., VIII (A) and VIII (B) and VIII (C)) of Elective-II irrespective of the paper chosen under Elective-I.
 - f) It is resolved to approve the modified syllabus of "**Information and Communication Technology**" the Life Skill Course in the II Semester of all I B.Sc./B.Com./B.A./ B.B.A./ B.C.A., courses w.e.f. the academic year 2020-21.
 - g) It is resolved to approve the Certificate Course i.e., "**Basic Computer Applications**" syllabus for the I Semester of all I B.Sc., /B.Com., /B.A., /B.B.A., /B.C.A., courses w.e.f the academic year 2021-22.
2. Discussed the modalities of social immersion program which is scheduled to be conducted at the end of II Semester. Since some clarification is required, it is decided to seek advice from the Dean, Academic affairs of Adikavi Nannaya University regarding the issue.
3. Discussed various topics for seminars/workshops and resolved to conduct a Seminar on Block chain Applications Uses and Opportunities.
4. It is resolved that the online courses like MOOCS, SWAYAM and courses offered by Spoken tutorial should be done by the students.
5. Discussed regarding the staff publications. It is resolved that the staff members should make good effort to have their publications in the UGC recognized journals.
6. It is resolved to make MoU's with industry and make filed visits by taking the students to companies and also invite industry people to the college for giving awareness to the students on job opportunities.
7. The College has entered into the Academic Collaboration with B.V.Raju College, Bhimavaram on 04-09-2019 and Sir C.R.Reddy College (A), Eluru on 27-10-2021. Hence, it is resolved to organize Guest lectures/ Student Seminars/Student Exchange Programs by inviting the staff and students of B.V.Raju College and Sir C.R. Reddy College.
8. It resolved to evolve a plan of action for the consultancy activity by approaching the business organizations in the district.
9. It is resolved to authorize the Chairman, Board of Studies to strengthen the syllabus and model papers of theory and practical examinations keeping in view the latest developments in consultation with other members of the department. Any further guidelines/instructions from APSCHE/ University to be adopted as communicated.

APPROVED



K. L. L. L.

G. S. S. S.

Ravi

M. Thi

B. China Ura Buresome
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SRI Y.N. COLLEGE (AUTONOMOUS)
(NAAC ACCREDITED 'A' GRADE COLLEGE)
NARSAPUR - 534 275, W.G.Dt.,

ZOOM MEETING ID

B. China Veeraswamy is inviting you to a scheduled Zoom meeting.

Topic: Dept. of Computer Science, Sri Y.N.College, Narsapur Board of Studies Meeting

Time: Oct 29, 2021 11:00 PM India

Join Zoom Meeting

<https://us04web.zoom.us/j/6310669722?pwd=ejZaUjR6Vm94aTlnZ0NWSlljbmIFUT09>

Meeting ID: 631 066 9722

Passcode: 123456

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B. China Veeraswamy

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SRI Y.N. COLLEGE (AUTONOMOUS)
(NAAC ACCREDITED 'A' GRADE COLLEGE)
NARSAPUR - 534 275, W.G.Dt.,**

A. Abhishek Reddy G. Srinivas

P. Srinivas

Ravi

[Signature]

M. Jhi

Participants (12)

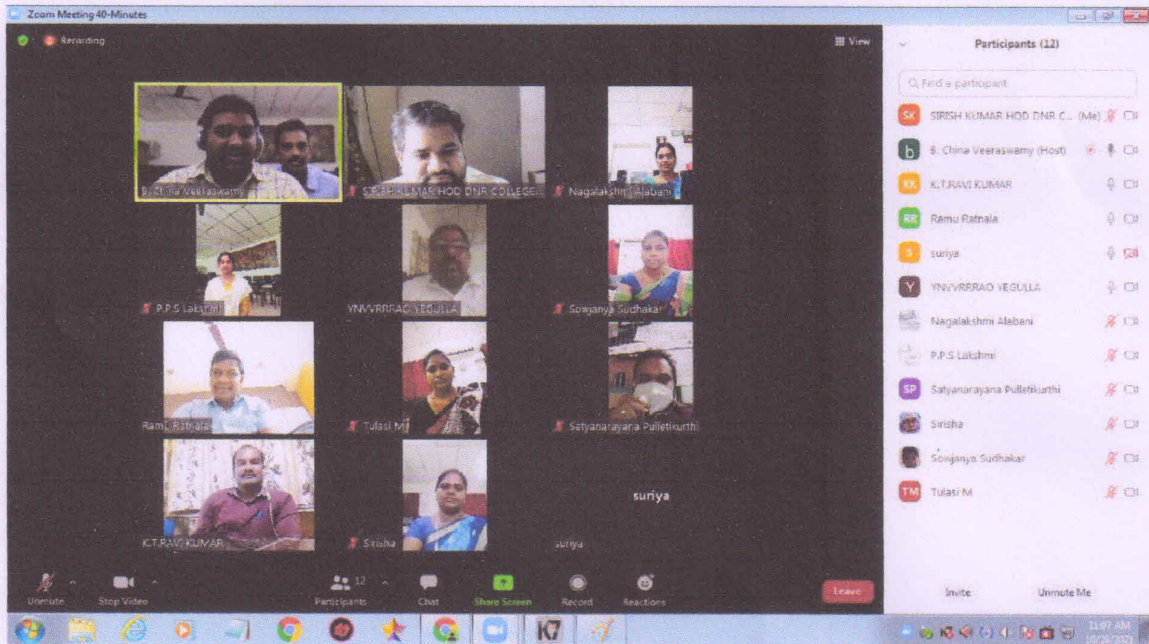
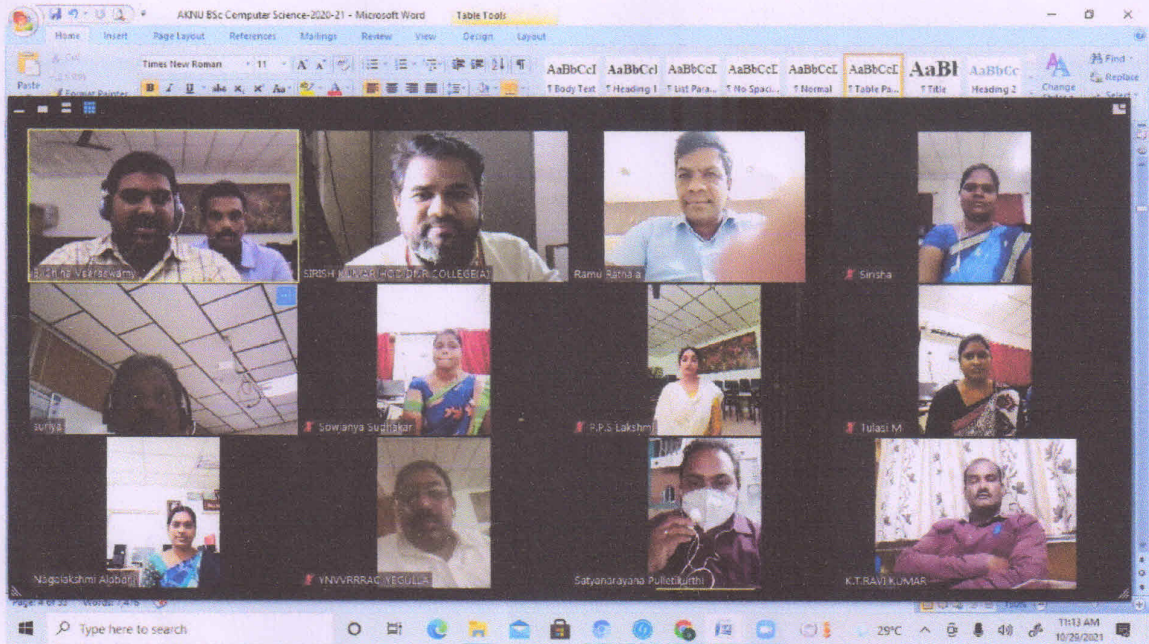
Find a participant

SK	SIRISH KUMAR HOD DNR C... (Me)		
b	B. China Veeraswamy (Host)		
KK	K.TRAVI KUMAR		
RR	Ramu Ratnala		
S	suriya		
Y	YNVRRRAO YEGULLA		
	Nagalakshmi Alabani		
	P.P.S Lakshmi		
SP	Satyanarayana Pulletikurthi		
	Sirisha		
	Sowjanya Sudhakar		
TM	Tulasi M		

Invite Unmute Me

11:07 AM 10/29/2021

Screenshots of BOS Meeting held on 29-10-2021



Find a participant

- SK SRESH KUMAR HOD DNR C... (Me) [Muted]
- b B. China Veeraswamy (Host)
- KR K.T.RAJ KUMAR
- RR Ramu Ratnala
- S suriya
- Y YNVRRAO YEGULLA
- Nagalakshmi Alabari
- P.P.S Lakshmi
- SP Satyanarayana Puletkurthi
- Sircha
- Sowjanya Sudhakar
- TM Tulasi M

Unmute
 Stop Video
 12 Participants
 Chat
 Share Screen
 Record
 Reactions
 Leave

Invite Unmute Me



Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc. (Computer Science): I Semester under CBCS w.e.f 2020-2021

PAPER – I
PROBLEM SOLVING IN 'C'

SEMESTER-I

MID-1

UNIT I

General Fundamentals: Introduction to Computers: Block Diagram of a Computer, Characteristics and Limitations of Computers, Applications of Computers, Types of Computers, Computer Generations.

Number systems: Working with binary, octal, decimal and Hexa decimal numbering system.

Introduction to Algorithms and Programming Languages: Algorithm – Key features of Algorithms, Flow Charts, Programming Languages – Generations of Programming Languages – Structured Programming Language- Design and Implementation of Correct, Efficient and Maintainable Programs.

UNIT II

Introduction to C: 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.

Decision Control and Looping Statements: Introduction to Decision Control Statements– Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Goto Statement

MID-II

UNIT III

Arrays: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array– Operations on Arrays – one dimensional, two dimensional and multi dimensional arrays, Character handling and Strings.

UNIT IV

Functions: Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive functions.

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

UNIT V

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Pointer Expressions and Pointer Arithmetic – Null Pointers - Passing Arguments to Functions using Pointer – Pointer and Arrays – Memory Allocation in C Programs – Memory Usage – Dynamic Memory Allocation – Drawbacks of Pointers

Files: Introduction to Files – Using Files in C – Reading Data from Files – Writing Data to Files – Detecting the End-of-file – Error Handling during File Operations – Accepting Command Line Arguments.

BOOKS

1. E Balagurusamy – Programming in ANSIC – Tata McGraw-Hill publications.
2. Brain W Kernighan and Dennis M Ritchie - The 'C' Programming language" - Pearson publications.
3. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publications.
4. Yashavant Kanetkar - Let Us 'C' – BPB Publications.

GUIDELINES TO THE PAPER SETTER

BLUE PRINT

Unit No.	Essay Questions	Short Answer Questions
I	3 (Section-A)	Nil (Section-C)
II	2 (Section-A)	3 (Section-C)
III	2 (Section-B)	2 (Section-C)
IV	2 (Section-B)	2 (Section-C)
V	1 (Section-B)	1 (Section-C)

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A. Narayan
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B. China
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NARSAPUR - 534 275, W.G.Dt.,

M. Thi



Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc. (Computer Science): I Semester under CBCS w.e.f 2020-21
PAPER – I
PROBLEM SOLVING IN 'C'
SEMESTER-I

Time: 3 Hours

Max.Marks: 75

Note: 1. Answer Any Five Questions by choosing at least two from Section-A and Section-B.
2. Each one carries 10 marks.

5 x 10 = 50M

SECTION-A

1. Essay question from Unit-I.
2. Essay Question from Unit-I.
3. Essay Question from Unit-I.
4. Essay Question from Unit-II.
5. Essay Question from Unit-II.

SECTION-B

6. Essay Question from Unit-III.
7. Essay Question from Unit-III.
8. Essay Question from Unit-IV.
9. Essay Question from Unit-IV.
10. Essay Question from Unit-V.

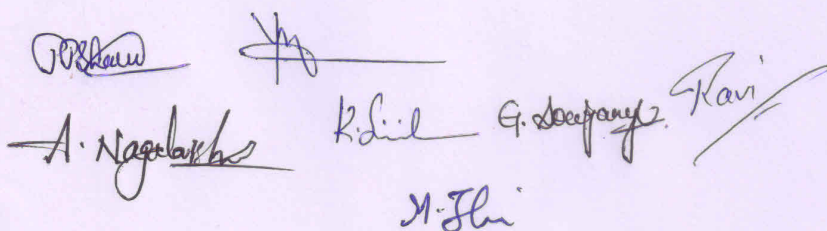
SECTION-C

Answer any five questions from the following. Each one carries 5 marks.

5 x 5 = 25M

11. Short Question from Unit-II.
12. Short Question from Unit-II.
13. Short Question from Unit-II.
14. Short Question from Unit-III.
15. Short Question from Unit-III.
16. Short Question from Unit-IV.
17. Short Question from Unit-IV.
18. Short Question from Unit-V.

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A. Nagalakshmi, K. Lil, G. Deepanjali, Ravi, M. Jhu

B. China Chudappa
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PAPER – I
PROBLEM SOLVING IN 'C' LAB

SEMESTER-I

1. Write a program to check whether the given number is Armstrong or not.
2. Write a program to find the sum of individual digits of a positive integer..
3. Write a program to generate the first n terms of the Fibonacci sequence.
4. Write a program to find both the largest and smallest number in a list of integer values
5. Write a program to demonstrate refaction of parameters in swapping of two integer values using Call by Value & Call by Address
6. Write a program that uses functions to add two matrices.
7. Write a program to calculate factorial of given integer value using recursive functions
8. Write a program for multiplication of two N X N matrices.
9. Write a program to perform various string operations.
10. Write a program to search an element in a given list of values.
11. Write a program to sort a given list of integers in ascending order.
12. Write a program to calculate the salaries of all employees using **Employee (ID, Name, Designation, Basic Pay, DA, HRA, Gross Salary, Deduction, Net Salary)** structure.
 - a. DA is 30 % of Basic Pay
 - b. HRA is 15% of Basic Pay
 - c. Deduction is 10% of (Basic Pay + DA)
 - d. Gross Salary = Basic Pay + DA+ HRA
 - e. Net Salary = Gross Salary – Deduction
13. Write a program to illustrate pointer arithmetic.
14. Write a program to read the data character by character from a file.
15. Write a program to create **Book (ISBN, Title, Author, Price, Pages, Publisher)** structure and store book details in a file and perform the following operations
 - a. Add book details
 - b. Search a book details for a given ISBN and display book details, if available
 - c. Update a book details using ISBN
 - d. Delete book details for a given ISBN and display list of remaining Books.

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B. China Chirabhusa
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A. Nagendra Reddy G. Srinivas

Kavi

M. Jhri



Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc. (Computer Science): I Semester under CBCS w.e.f 2020-21
PAPER – I
PROBLEM SOLVING IN 'C'

SYLLABUS DEVIATION

S.No	Topics Reviewed	Added Topics	Justification
1.	Unit-1: General Fundamentals of Computers	Number systems: Working with binary, octal, decimal and Hexa decimal numbering system.	For better Understanding and to impart in depth knowledge on the basic fundamentals.

APPROVED

K. Lail G. Sreenivasulu Reddy S. Praveen
A. Nagaraj M. Sri

B. China Choralu
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NARSAPUR - 534 275, W.G.D.,



Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc., (Computer Science): II Semester under CBCS w.e.f 2020-2021

PAPER – II
DATA STRUCTURES USING 'C'
SEMESTER-II
MID-1

UNIT – I:

Introduction to Data Structures: Introduction to the Theory of Data Structures, Data Representation, Abstract Data Types, Data Types, Primitive Data Types, Data Structure and Structured Type, Atomic Type, Difference between Abstract Data Types, Data Types, and Data Structures, Refinement Stages.

Principles of Programming and Analysis of Algorithms: Software Engineering, Program Design, Algorithms, Different Approaches to Designing an Algorithm, Complexity, Big 'O' Notation, Algorithm Analysis, Structured Approach to Programming, Recursion, Tips and Techniques for Writing Programs in 'C'.

UNIT – II:

Arrays: Introduction to Linear and Non- Linear Data Structures, One- Dimensional Arrays, Array Operations, Two- Dimensional Arrays, Multidimensional Arrays, Pointers and Arrays, an Overview of Pointers.

Linked Lists: Introduction to Linked Lists, Dynamic Memory Allocation, Basic Linked List Operations, Doubly Linked List, Circular Linked List, Atomic Linked List, Linked List in Array, Linked List versus Array;

MID-II

UNIT – III:

Stacks: Introduction to Stacks, Stack as an Abstract Data Type, Representation of Stacks through Arrays, Representation of Stacks through Linked Lists, Applications of Stacks, Stacks and Recursion

Queues: Introduction, Queue as an Abstract data Type, Representation of Queues, Circular Queues, Double Ended Queues- Dequeues, Priority Queues, Application of Queues.

UNIT – IV:

Trees: Definition of tree -Tree Terminology - Types of Trees - Operations on Trees.

Binary Trees: Introduction to Non- Linear Data Structures, Introduction Binary Trees, Basic Definition of Binary Trees, Properties of Binary Trees, Representation of Binary Trees, Operations on a Binary Search Tree, Binary Tree Traversal, Counting Number of Binary Trees, Applications of Binary Tree

(P.T.O)

UNIT – V:

Searching and sorting: Sorting – An Introduction, Bubble Sort, Insertion Sort, Merge Sort; Searching – An Introduction, Linear or Sequential Search, Binary Search, Indexed Sequential Search.

Graphs: Introduction to Graphs, Terms Associated with Graphs, Sequential Representation of Graphs, Linked Representation of Graphs, Traversal of Graphs, Spanning Trees, Shortest Path, Application of Graphs.

BOOKS:

1. "Data Structures using C", ISRD group Second Edition, TMH.
2. "Data Structures through C", YashavantKanetkar, BPB Publications
3. "Data Structures Using C" Balagurusamy E. TMH

GUIDELINES TO THE PAPER SETTER

BLUE PRINT

Unit No.	Essay Questions	Short Answer Questions
I	3 (Section-A)	1 (Section-C)
II	2 (Section-A)	3 (Section-C)
III	2 (Section-B)	2 (Section-C)
IV	1 (Section-B)	1 (Section-C)
V	2 (Section-B)	1 (Section-C)

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A. Naghara, K. L. L., G. S., P. S., Ravi, M. Jhi

B. Chitra Choudhary
CHAIRMAN
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Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc., (Computer Science): II Semester under CBCS w.e.f 2020-21
PAPER – II
DATA STRUCTURES USING 'C'
SEMESTER-II

Time: 3 Hours

Max.Marks: 75

Note:1. Answer Any Five Questions by choosing at least two from Section-A and Section-B.

2. Each one carries 10 marks.

5 x 10 =50M

SECTION-A

1. Essay question from Unit-I.
2. Essay Question from Unit-I.
3. Essay Question from Unit-I.
4. Essay Question from Unit-II.
5. Essay Question from Unit-II.

SECTION-B

6. Essay Question from Unit-III.
7. Essay Question from Unit-III.
8. Essay Question from Unit-IV.
9. Essay Question from Unit-V.
10. Essay Question from Unit-V.

SECTION-C

Answer any five questions from the following. Each one carries 5 marks.

5 x 5= 25M

11. Short Question from Unit-I.
12. Short Question from Unit-II.
13. Short Question from Unit-II.
14. Short Question from Unit-II.
15. Short Question from Unit-III.
16. Short Question from Unit-III.
17. Short Question from Unit-IV.
18. Short Question from Unit-V.

K. Lil *G. Sreejany* *Ravi*
A. Nagababu *M. Thi*

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B. China Ura
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(NAAC ACCREDITED 'A' GRADE COLLEGE)
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Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc. (Computer Science): II Semester under CBCS w.e.f 2020-21
PAPER – II
DATA STRUCTURES USING 'C' LAB
SEMESTER-II

1. Write a program to read 'N' numbers of elements into an array and also perform the following operation on an array
 - a. Add an element at the beginning of an array
 - b. Insert an element at given index of array
 - c. Update a element using a values and index
 - d. Delete an existing element
2. Write a program using stacks to convert a given
 - a. postfix expression to prefix
 - b. prefix expression to postfix
 - c. infix expression to postfix
3. Write Programs to implement the Stack operations using an array
4. Write Programs to implement the Stack operations using Linked List.
5. Write Programs to implement the Queue operations using an array.
6. Write Programs to implement the Queue operations using Linked List.
7. Write a program for arithmetic expression evaluation.
8. Write a program for Binary Search Tree Traversals
9. Write a program to implement dequeue using a doubly linked list.
10. Write a program to search an item in a given list using the following Searching Algorithm
 - a. Linear Search
 - b. Binary Search.
11. Write a program for implementation of the following Sorting Algorithms
 - a. Bubble Sort
 - b. Insertion Sort
 - c. Quick Sort
12. Write a program for polynomial addition using single linked list
13. Write a program to find out shortest path between given Source Node and Destination Node in a given graph using Dijkstra's algorithm.
14. Write a program to implement Depth First Search graph traversals algorithm
15. Write a program to implement Breadth First Search graph traversals algorithm

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A. Nagalaxi M. Jini

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B. China Choudhary
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Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc. (Computer Science): II Semester under CBCS w.e.f 2020-21
PAPER – II
DATA STRUCTURES USING 'C' LAB
SEMESTER-II

SYLLABUS DEVIATION

S.No	Topics Reviewed	Added Topics	Justification
4.	Unit-4:	Trees: Definition of tree-Tree Terminology-Types of Trees-Operations on Trees.	For better Understanding about the concept.

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K. Dilip G. Srinivasan
A. Nagaraj M. Jothi

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[Handwritten signature]
B. Chitra Chakraborty
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Batch 2020-2023
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
II B.Sc. (Computer Science): III Semester under CBCS w.e.f 2020-2021
THEORY PAPER – III
DATABASE MANAGEMENT SYSTEM
SEMESTER-III

Aim and objectives of Course:

- The objective of the course is to introduce the design and development of databases with special emphasis on relational databases.

Learning outcomes of Course: Upon successful completion of the course, a student will be able to:

- Gain knowledge of Database and DBMS.
- Understand the fundamental concepts of DBMS with special emphasis on relational data model.
- Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database
- Model data base using ER Diagrams and design database schemas based on the model.
- Create a small database using SQL.
- Store, Retrieve data in database.

Detailed Syllabus: (Five units with each unit having 12 hours of class work)

UNIT I:

Overview of Database Management System: Introduction to data, information, database, database management systems, file-based system, Drawbacks of file-Based System, database approach, Classification of Database Management Systems, advantages of database approach, Various Data Models, Components of Database Management System, three schema architecture of data base, costs and risks of database approach.

UNIT II:

Entity-Relationship Model: Introduction, the building blocks of an entity relationship diagram, classification of entity sets, attribute classification, relationship degree, relationship classification, reducing ER diagram to tables, enhanced entity-relationship model (EER model), generalization and specialization, IS A relationship and attribute inheritance, multiple inheritance, constraints on specialization and generalization, advantages of ER modeling.

UNIT III:

Relational Model: Introduction, CODD Rules, relational data model, concept of key, relational integrity, relational algebra, relational algebra operations, advantages of relational algebra, limitations of relational algebra, relational calculus, tuple relational calculus, domain relational Calculus (DRC), Functional dependencies and **Normalization:** Normalization, the need for Normalization, Normalization

Process: Conversion in to First Normal Form, Conversion in to Second Normal form, Conversion into third Normal form

UNIT IV:

Structured Query Language: Introduction, History of SQL Standard, Commands in SQL, Data Types in SQL, Data Definition Language, Selection Operation, Projection Operation, Aggregate functions, Data Manipulation Language, Table Modification Commands, Join Operation, Set Operations, View, Sub Query.

UNIT V

PL/SQL: Introduction, Shortcomings of SQL, Structure of PL/SQL, PL/SQL Language Elements, Data Types, Operators Precedence, Control Structure, Steps to Create a PL/SQL, Program, Iterative Control, Procedure, Function, Database Triggers, Types of Triggers.

Transaction Management and Concurrency Control: What is transaction, Transaction properties, Transaction management with SQL, Transaction Log, Concurrency control, Concurrency control with locking Methods: Database, Table, Page, row and field level locks; Two phase locking to ensure serializability; Deadlock, Database Recovery Management: Deferred-Write Technique;

Prescribed Books:

1. Fundamentals of Relational Database Management Systems by S. Sumathi, S. Esakkirajan, Springer Publications
2. Database System Concepts by Abraham Silberschatz, Korth, and S. Sudarshan, McGrawhill
3. Database Management Systems by Raghu Ramakrishnan, McGrawhill

REFERENCES:

1. Principles of Database Systems by J. D. Ullman
2. Fundamentals of Database Systems by R. Elmasri and S. Navathe
3. SQL: The Ultimate Beginners Guide by Steve Tale.

**GUIDELINES TO THE PAPER SETTER
BLUE PRINT**

Unit no	Essay Questions	Short Answer Questions
I	3 (Section-A)	1
II	2 (Section-A)	2
III	2 (Section-B)	1
IV	2 (Section-B)	2
V	1 (Section-B)	2

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B. China Chandra

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A. Nagappa *K. Dil* *G. Subramanyam* *Ravi*
M. Jhi



Batch 2020-2023
SRI Y.N COLLEGE (AUTONOMOUS): NARSAPUR
II B.Sc., (Computer Science): III Semester under CBCS w.e.f 2020-21
PAPER-III
DATABASE MANAGEMENT SYSTEM
III SEMESTER

Time: 3 Hours

Max. Marks: 75

NOTE: 1. Answer Any FIVE Questions by choosing at least two from Section-A and Section-B
2. Each one carries 10 marks.

5X10=50

SECTION-A

1. Essay Question from Unit-1.
2. Essay Question from Unit-1.
3. Essay Question from Unit-1.
4. Essay Question from Unit-2.
5. Essay Question from Unit-2.

SECTION-B

6. Essay Question from Unit-3.
7. Essay Question from Unit-3.
8. Essay Question from Unit-4
9. Essay Question from Unit-4.
10. Essay Question from Unit-5.

SECTION-C

Note: 1. Answer any FIVE questions from the following.

2. Each one Carries 5 Marks.

5X5=25

11. Short Answer Question from Unit-1.
12. Short Answer Question from Unit-2
13. Short Answer Question from Unit-2.
14. Short Answer Question from Unit-3.
15. Short Answer Question from Unit-4.
16. Short Answer Question from Unit-4.
17. Short Answer Question from Unit-5.
18. Short Answer Question from Unit-5.

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B. Chitra Uvashankar

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A. Nagalakshmi

M. Thi

Ravi

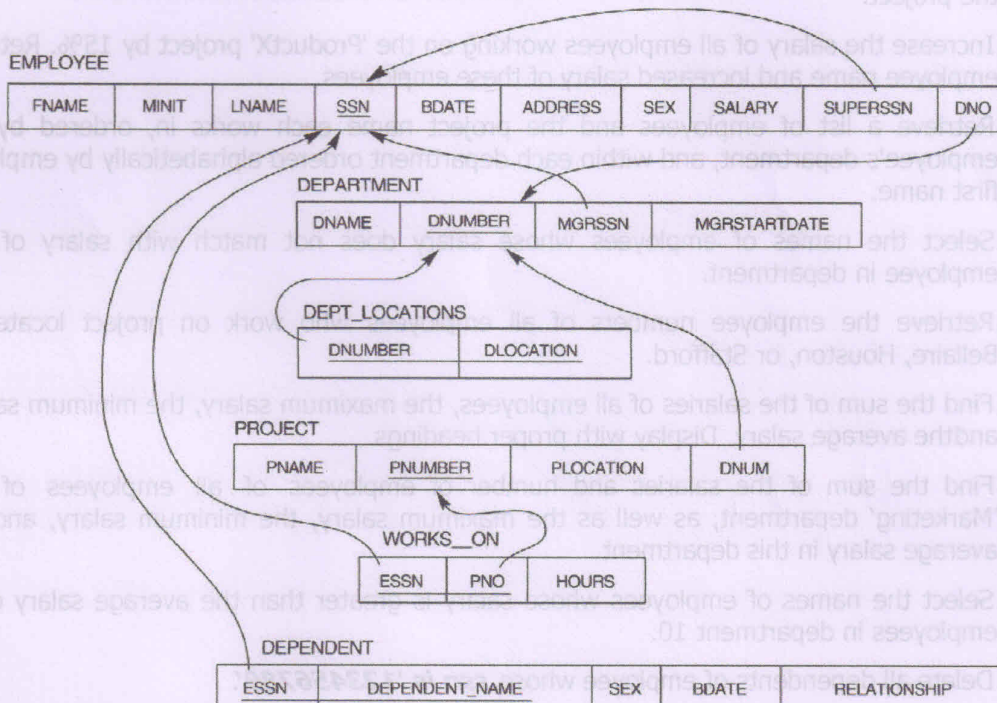


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SRI Y.N COLLEGE (AUTONOMOUS): NARSAPUR
II B.Sc., (Computer Science): III Semester under CBCS w.e.f 2020-21
PAPER-III
DATABASE MANAGEMENT SYSTEM LAB
III SEMESTER

Details of Lab Syllabus: DATABASE MANAGEMENT SYSTEM LAB

1. Draw ER diagram for hospital administration
2. Creation of college database and establish relationships between tables
3. Relational database schema of a company is given in the following figure.

Relational Database Schema - COMPANY



Questions to be performed on above schema

1. Create above tables with relevant **Primary Key, Foreign Key and other constraints**
2. Populate the tables with data
3. Display all the details of all employees working in the company.
4. Display **ssn, lname, fname, address** of employees who work in department no 7.
5. Retrieve the **Birthdate and Address** of the employee whose name is 'Franklin T.Wong'
6. Retrieve the name and salary of every employee.
7. Retrieve all distinct salary values
8. Retrieve all employee names whose address is in 'Bellaire'
9. Retrieve all employees who were born during the 1950s

(P.T.O)

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10. Retrieve all employees in department 5 whose salary is between 50,000 and 60,000 (inclusive)
11. Retrieve the names of all employees who do not have supervisors
12. Retrieve SSN and department name for all employees
13. Retrieve the name and address of all employees who work for the 'Research' department
14. For every project located in 'Stafford', list the project number, the controlling department number, and the department manager's last name, address, and birth date.
15. For each employee, retrieve the employee's name, and the name of his or her immediate supervisor.
16. Retrieve all combinations of Employee Name and Department Name
17. Make a list of all project numbers for projects that involve an employee whose last name is 'Narayan' either as a worker or as a manager of the department that controls the project.
18. Increase the salary of all employees working on the 'ProductX' project by 15%. Retrieve employee name and increased salary of these employees.
19. Retrieve a list of employees and the project name each works in, ordered by the employee's department, and within each department ordered alphabetically by employee first name.
20. Select the names of employees whose salary does not match with salary of any employee in department.
21. Retrieve the employee numbers of all employees who work on project located in Bellaire, Houston, or Stafford.
22. Find the sum of the salaries of all employees, the maximum salary, the minimum salary, and the average salary. Display with proper headings
23. Find the sum of the salaries and number of employees of all employees of the 'Marketing' department, as well as the maximum salary, the minimum salary, and the average salary in this department.
24. Select the names of employees whose salary is greater than the average salary of all employees in department 10.
25. Delete all dependents of employee whose *ssn is '123456789'*.
26. Perform a query using alter command to drop/add field and a constraint in Employee table.

PRACTICAL BREAK UP OF MARKS:

1. Procedure/Steps -	10 Marks
2. Execution -	20 Marks
3. Practical Record -	10 Marks
4. Viva -	10 Marks

Total	50 Marks

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M. Sri



Batch 2020-2023
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II B.Sc. (Computer Science): III Semester under CBCS w.e.f 2020-2021
THEORY PAPER – III
DATABASE MANAGEMENT SYSTEM
SEMESTER-III

ADDITIONAL INPUTS

S.No	Topics Reviewed	Topics Added	Justification
1.	Unit-5:	Transaction Management and Concurrency Control: What is transaction, Transaction properties, Transaction management with SQL, Transaction Log, Concurrency control, Concurrency control with locking Methods: Database, Table, Page, row and field level locks; Two phase locking to ensure serializability; Deadlock, Database Recovery Management: Deferred-Write Technique;	For additional knowledge of the student.

A. Nagesh K. Dil *G. Sreejaya* *M. Jhi*

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Batch 2020-2023
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
II B.Sc., (Computer Science): IV Semester under CBCS w.e.f 2020-2021
THEORY PAPER – IV
OBJECT ORIENTED PROGRAMMING USING JAVA
SEMESTER-IV

Aim and objectives of Course:

- To introduce the fundamental concepts of Object-Oriented programming and to design & implement object oriented programming concepts in Java.

Learning outcomes of Course:

- Understand the benefits of a well-structured program
- Understand different computer programming paradigms
- Understand underlying principles of Object-Oriented Programming in Java
- Develop problem-solving and programming skills using OOP concepts
- Develop the ability to solve real-world problems through software development in high-level programming language like Java

Detailed Syllabus: (Five units with each unit having 12 hours of class work)

UNIT I:

Introduction to Java: Features of Java, The Java virtual Machine, Parts of Java, Java Program Structure, Implementing Java Program, Differences between C, C++ and Java.

Naming Conventions and Data Types: Naming Conventions in Java, Data Types in Java, Literals

Operators in Java: Operators, Priority of Operators.

Control Statements in Java: if... else Statement, do... while Statement, while Loop, for Loop, switch Statement, break Statement, continue Statement, return Statement.

Input and Output: Accepting Input from the Keyboard, Reading Input with Java.util.Scanner Class, Displaying Output with System.out.printf(), Displaying Formatted Output with String.format().

Arrays: Types of Arrays, Three Dimensional Arrays (3D array), array name. length, Command Line Arguments

UNIT II:

Strings: Creating Strings, String Class Methods, String Comparison, Immutability of Strings, Vectors, and Wrapper classes.

Introduction to OOPs: Problems in Procedure Oriented Approach, Features of Object-Oriented Programming System (OOPS), Benefits of OOPS and Applications of OOPS.

Classes and Objects: Object Creation, Initializing the Instance Variables, Access Specifiers, Constructors.

Methods in Java: Method Header or Method Prototype, Method Body, Understanding Methods, Static Methods, Static Block, The keyword 'this', Instance Methods, Passing Primitive Data Types to Methods, Passing Objects to Methods, Passing Arrays to Methods, Recursion, Factory Methods, Overloading methods and overriding methods,

Inheritance: Inheritance, Types of Inheritance; The keyword 'super', The Protected Specifier.

UNIT III:

Polymorphism: Polymorphism with Variables, Polymorphism using Methods, Polymorphism with Static Methods, Polymorphism with Private Methods, Polymorphism with Final Methods, final Class.

Type Casting: Types of Data Types, Casting Primitive Data Types, Casting Referenced Data Types, The Object Class.

Abstract Classes: Abstract Method and Abstract Class.

Interfaces: Interface, Multiple Inheritance using Interfaces.

Packages: Package, Different Types of Packages, The JAR Files, Interfaces in a Package, Creating Sub Package in a Package, Access Specifiers in Java, Creating API Document.

Exception Handling: Errors in Java Program, Exceptions, throws Clause, throw Clause, Types of Exceptions, Re – throwing an Exception.

UNIT – IV

Streams: Stream, Creating a File using FileOutputStream, Reading Data from a File using FileInputStream, Creating a File using FileWriter, Reading a File using FileReader, Zipping and Unzipping Files, Serialization of Objects, Counting Number of Characters in a File, File Copy, File Class

Threads: Single Tasking, Multi Tasking, Uses of Threads, Creating a Thread and Running it, Terminating the Thread, Single Tasking Using a Thread, Multi Tasking Using Threads, Multiple Threads Acting on Single Object, Thread Class Methods, Deadlock of Threads, Thread Communication, Thread Priorities, thread Group, Daemon Threads, Applications of Threads, Thread Life Cycle.

UNIT V:

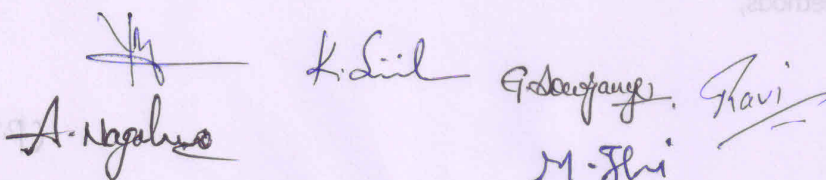
Applets: Creating an Applet, Local and Remote Applets, Differences between Applets and Applications, Uses of Applets, <APPLET> tag, A Simple Applet, An Applet with Swing Components, Animation in Applets, A Simple Game with an Applet, Applet Parameters, Applet Life Cycle

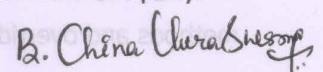
Java Database Connectivity: Database Servers, Database Clients, JDBC (Java Database Connectivity), Working with Oracle Database, Working with MySQL Database, Stages in a JDBC Program, Registering the Driver, Connecting to a Database, Preparing SQL Statements, Using jdbc-odbc Bridge Driver to Connect to Oracle Database, Retrieving Data from MySQL Database, Retrieving Data from MS Access Database, Stored Procedures and Callable Statements, Types of Result Sets.

Prescribed Text Books:

1. Core Java: An Integrated Approach, Authored by Dr. R. Nageswara Rao & Kogent LearningSolutions Inc.
2. E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw- Hill Company.

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REFERENCES:

1. John R. Hubbard, Programming with Java, Second Edition, Schaum's outlineSeries, TMH.
2. Deitel&Deitel. Java TM: How to Program, PHI (2007)

GUIDELINES TO THE PAPER SETTER

BLUE PRINT

Unit no	Essay Questions	Short Answer Questions
I	3 (Section-A)	NIL
II	2 (Section-A)	2
III	3 (Section-B)	2
IV	1 (Section-B)	2
V	1 (Section-B)	2

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B. Chitra UvraSwamy

K. Lil G. Deepanya
A. Nagabhar
M. Jh
Ravi

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Batch 2020-2023
SRI Y.N COLLEGE (AUTONOMOUS): NARSAPUR
II B.Sc., (Computer Science): IV Semester under CBCS w.e.f 2020-21
PAPER-IV
OBJECT ORIENTED PROGRAMMING USING JAVA
IV SEMESTER

Time: 3 Hours

Max. Marks: 75

NOTE:1. Answer Any FIVE Questions by choosing at least two from Section-A and Section-B.

2. Each one carries 10 marks.

5X10=50

SECTION-A

1. Essay Question from Unit-1.
2. Essay Question from Unit-1.
3. Essay Question from Unit-1.
4. Essay Question from Unit-2.
5. Essay Question from Unit-2.

SECTION-B

6. Essay Question from Unit-3.
7. Essay Question from Unit-3.
8. Essay Question from Unit-3
9. Essay Question from Unit-4.
10. Essay Question from Unit-5.

SECTION-C

Note: 1. Answer any FIVE questions from the following.

2. Each one Carries 5 Marks.

5X5=25

11. Short Answer Question from Unit-2.
12. Short Answer Question from Unit-2
13. Short Answer Question from Unit-3.
14. Short Answer Question from Unit-3.
15. Short Answer Question from Unit-4.
16. Short Answer Question from Unit-4.
17. Short Answer Question from Unit-5.
18. Short Answer Question from Unit-5.

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A. Nagalakshmi *K. Laila* *G. Saranya* *M. Thi* *Ravi*



Batch 2020-2023
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II B.Sc. (Computer Science): IV Semester under CBCS w.e.f 2020-2021
THEORY PAPER – IV
OBJECT ORIENTED PROGRAMMING USING JAVA
SEMESTER-IV

Details of Lab Syllabus: Object Oriented Programming using Java Lab

1. Write a program to read **Student Name, Reg.No, Marks [5]** and calculate **Total, Percentage, Result**. Display all the details of students
2. Write a program to perform the following String Operations
 - a. Read a string
 - b. Find out whether there is a given substring or not
 - c. Compare existing string by another string and display status
 - d. Replace existing string character with another character
 - e. Count number of works in a string
3. Java program to implements Addition and Multiplication of two N X N matrices.
4. Java program to demonstrate the use of Constructor.
5. Calculate area of the following shapes using method overloading.
 - a. Triangle
 - b. Rectangle
 - c. Circle
 - d. Square
6. Implement inheritance between **Person (Aadhar, Surname, Name, DOB, and Age)** and **Student (Admission Number, College, Course, Year)** classes where ReadData(), DisplayData() are overriding methods.
7. Java program for implementing Interfaces
8. Java program on Multiple Inheritance.
9. Java program for to display **Serial Number from 1 to N** by creating two Threads
10. Java program to demonstrate the following exception handlings
 - a. Divided by Zero
 - b. Array Index Out of Bound
 - c. File Not Found
 - d. Arithmetic Exception
 - e. User Defined Exception
11. Create an Applet to display different shapes such as Circle, Oval, Rectangle, Square and Triangle.
12. Write a program to create **Book (ISBN, Title, Author, Price, Pages, Publisher)** structure and store book details in a file and perform the following operations
 - a. Add book details
 - b. Search a book details for a given ISBN and display book details, if available
 - c. Update a book details using ISBN
 - d. Delete book details for a given ISBN and display list of remaining Books

RECOMMENDED CO-CURRICULAR ACTIVITIES:

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

A. Measurable

1. Assignments (in writing and doing forms on the aspects of syllabus content and outside the syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity))
3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups as teams))
4. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity))

B. General

1. Group Discussion
2. Try to solve MCQ's available online.
3. Others

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

1. The oral and written examinations (Scheduled and surprise tests),
2. Closed-book and open-book tests,
3. Problem-solving exercises,
4. Practical assignments and laboratory reports,
5. Observation of practical skills,
6. Individual and group project reports like "Creating Text Editor in C".
7. Efficient delivery using seminar presentations,
8. Viva voce interviews.
9. Computerized adaptive testing, literature surveys and evaluations,
10. Peers and self-assessment, outputs form individual and collaborative work.

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A. Nagaraj
K. Sril
G. Srinivas
M. Sri
Ravi

P. China Chirabeswar
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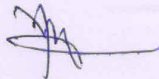


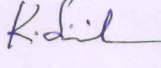
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THEORY PAPER – IV
OBJECT ORIENTED PROGRAMMING USING JAVA
SEMESTER-IV

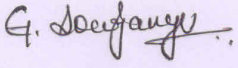
ADDITIONAL INPUTS

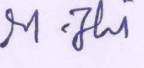
S.No	Topics Reviewed	Topics Added	Justification
2.	Unit-1:	1. Java Program Structure, 2. Implementing Java Program, 3. Differences between C, C++ and Java.	For better understanding of the subject
3.	Unit-2:	1. Vectors and Wrapper classes. 2. Benefits of OOPS and Applications of OOPS. 3. Overloading methods and overriding methods,	Add to impart in depth knowledge on the specific topics
4.	Unit-5:	1. Applet Life Cycle 2. Local and Remote Applets, 3. Differences between Applets and Applications,	Add to impart in depth knowledge on the specific topics

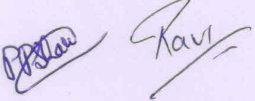
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II B.Sc. (Computer Science): IV Semester under CBCS w.e.f 2020-2021
THEORY PAPER – V
OPERATING SYSTEM
SEMESTER-IV

Aim and objectives of Course:

This course aims to introduce the structure and organization of a file system. It emphasizes various functions of an operating system like memory management, process management, device management, etc.

Learning outcomes of Course:

- Upon successful completion of the course, a student will be able to:
- Know Computer system resources and the role of operating system in resource management with algorithms
- Understand Operating System Architectural design and its services.
- Gain knowledge of various types of operating systems including Unix and Android.
- Understand various process management concepts including scheduling, synchronization, and deadlocks.
- Have a basic knowledge about multithreading.
- Comprehend different approaches for memory management.
- Understand and identify potential threats to operating systems and the security features designed to guard against them.
- Specify objectives of modern operating systems and describe how operating systems have evolved over time.
- Describe the functions of a contemporary operating system

Detailed Syllabus: (Five units with each unit having 12 hours of class work)

UNIT I:

What is Operating System? History and Evolution of OS, Basic OS functions, Resource Abstraction, Types of Operating Systems– Multiprogramming Systems, Batch Systems, Time Sharing Systems; Operating Systems for Personal Computers, Workstations and Hand-held Devices, Process Control & Real time Systems, Open-Source Operating systems.

UNIT II:

Processor and User Modes, Kernels, System Calls, Types of system calls and System Programs, System View of the Process and Resources, Process Abstraction, Process Hierarchy, Threads, Threading Issues, Thread Libraries; Process Scheduling, Pre-emptive Scheduling Algorithms: Round Robin and Shortest Remaining Time First; Non-Preemptive Scheduling Algorithms: First Come First Serve and Shortest job First.

UNIT III:

Process Management: Deadlock, Deadlock Characterization, Necessary and Sufficient Conditions for Deadlock, Deadlock Handling Approaches: Deadlock Prevention, Deadlock Avoidance and Deadlock Detection and Recovery. Concurrent and Dependent Processes, Critical Section, Semaphores, Methods

for Inter- process Communication; Process Synchronization, Classical Process Synchronization Problems: Producer-Consumer, Reader-Writer.

UNIT IV:

Memory Management: Physical and Virtual Address Space; Memory Allocation Strategies- Fixed and -Variable Partitions, Paging, Segmentation, Virtual Memory: Demand Paging, Copy-on-write, Page Replacement, Page Replacement algorithms: First in First out (FIFO), Optimal Page Replacement and Least recently used; allocation of frames, Thrashing.

UNIT V:

File and I/O Management, OS security: File Concepts, File Operations, file access methods: Sequential access and Direct access; File Allocation Methods: Contiguous allocation, Linked allocation and Indexed allocation; Directory Structure, Free space Management: Bit Vector, Linked list, Grouping and Counting; Device Management, Pipes, Buffer, Shared Memory, Security Policy Mechanism, Protection, Authentication and Internal Access Authorization

Introduction to Android Operating System, Android Development Framework, Android Application Architecture, Android Process Management and File System, Small Application Development using Android Development Framework.

Prescribed Text Books:

1. Operating System Principles by Abraham Silberschatz, Peter Baer Galvin and Greg Gagne (7th Edition) Wiley India Edition.
2. Operating Systems: Internals and Design Principles by Stallings (Pearson)

References:

1. Operating Systems by J. Archer Harris (Author), Jyoti Singh (Author) (TMH)
2. Online Resources for UNIT V

**GUIDELINES TO THE PAPER SETTER
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Unit no	Essay Questions	Short Answer Questions
I	3 (Section-A)	NIL
II	2 (Section-A)	2
III	2 (Section-B)	2
IV	2 (Section-B)	2
V	1 (Section-B)	2

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A. Nagalakshmi, K. Lil, G. Srinivas, P. Ravi, M. Jhi



Batch 2020-2023
SRI Y.N COLLEGE (AUTONOMOUS): NARSAPUR
II B.Sc., (Computer Science): IV Semester under CBCS w.e.f 2017-18
PAPER-V
OPERATING SYSTEM
IV SEMESTER

Time: 3 Hours

Max. Marks: 75

NOTE: 1. Answer Any FIVE Questions by choosing at least two from Section-A and Section-B
2. Each one carries 10 marks.

5X10=50

SECTION-A

1. Essay Question from Unit-1.
2. Essay Question from Unit-1.
3. Essay Question from Unit-1.
4. Essay Question from Unit-2.
5. Essay Question from Unit-2.

SECTION-B

6. Essay Question from Unit-3.
7. Essay Question from Unit-3.
8. Essay Question from Unit-4
9. Essay Question from Unit-4.
10. Essay Question from Unit-5.

SECTION-C

Note: 1. Answer any FIVE questions from the following.
2. Each one Carries 5 Marks.

5X5=25

11. Short Answer Question from Unit-2.
12. Short Answer Question from Unit-2
13. Short Answer Question from Unit-3.
14. Short Answer Question from Unit-3.
15. Short Answer Question from Unit-4.
16. Short Answer Question from Unit-4.
17. Short Answer Question from Unit-5.
18. Short Answer Question from Unit-5.

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B. China Uvabesara

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M. J. Jhi



Batch 2020-2023
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II B.Sc. (Computer Science): IV Semester under CBCS w.e.f 2017-2018
THEORY PAPER – V
OPERATING SYSTEM
SEMESTER-IV

ADDITIONAL INPUTS

S.No	Topics Reviewed	Topics Added	Justification
1.	Unit-1:	Open-Source Operating systems.	For better understanding of the topic
2.	Unit-2:	Types of system calls	For better understanding of the topic
3.	Unit-4:	Demand Paging, Copy-on-write, Page Replacement, Page Replacement algorithms: First in First out (FIFO), Optimal Page Replacement and Least recently used; allocation of frames, Thrashing.	For better understanding of the topic
4.	Unit-5:	File Concepts: File access methods: Sequential access and Direct access; Contiguous allocation, Linked allocation and Indexed allocation; Free space Management: Bit Vector, Linked list, Grouping and Counting;	Add to impart in depth knowledge on the specific topics

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A. Nagaraj *K. Lili* *G. Srinivas* *Ravi*
M. Jai



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THEORY PAPER – V
OPERATING SYSTEM
SEMESTER-IV

Details of Lab Syllabus: Operating Systems Lab using C/Java

1. Write a program to implement Round Robin CPU Scheduling algorithm
2. Simulate SJF CPU Scheduling algorithm
3. Write a program the FCFS CPU Scheduling algorithm
4. Write a program to Priority CPU Scheduling algorithm
5. Simulate Sequential file allocation strategies
6. Simulate Indexed file allocation strategies
7. Simulate Linked file allocation strategies
8. Simulate MVT and MFT memory management techniques
9. Simulate Single level directory File organization techniques
10. Simulate Two level File organization techniques
11. Simulate Hierarchical File organization techniques
12. Write a program for Bankers Algorithm for Dead Lock Avoidance
13. Implement Bankers Algorithm Dead Lock Prevention.
14. Simulate all Page replacement algorithms.

a) FIFO

b) LRU

c) LFU

15. Simulate Paging Techniques of memory management

RECOMMENDED CO-CURRICULAR ACTIVITIES:

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

A. Measurable

1. Assignments (in writing and doing forms on the aspects of syllabus content and

(P.T.O)

- outside syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity))
 3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups as teams))
 4. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity))

B. General

1. Group Discussion
2. Try to solve MCQ's available online.
3. Others

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

1. The oral and written examinations (Scheduled and surprise tests),
2. Closed-book and open-book tests,
3. Problem-solving exercises,
4. Practical assignments and laboratory reports,
5. Observation of practical skills,
6. Individual and group project reports like "Creating Text Editor in C".
7. Efficient delivery using seminar presentations,
8. Viva voce interviews.
9. Computerized adaptive testing, literature surveys and evaluations,
10. Peers and self-assessment, outputs form individual and collaborative work.

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(Co-curricular activities shall not promote copying from textbook or from other work and shall encourage self-independent and group learning)

A. Measurable

1. Assignments (in writing and doing forms on the aspects of syllabus content and



Batch 2019-2022

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III B.Sc. (Computer Science): V Semester under CBCS w.e.f 2017-2018

THEORY PAPER – V

DATABASE MANAGEMENT SYSTEM

SEMESTER-V

MID-I

UNIT I

Overview of Database Management System: Introduction, file-based system, Drawbacks of file-based System, Data and information, Database, Database management System, Objectives of DBMS, Classification of Database Management System, DBMS Approach, advantages of DBMS, ANSI/SPARK Data Model, data models, Components and Interfaces of Database Management System, Database Architecture, Situations where DBMS is not Necessary.

UNIT II

Entity-Relationship Model: Introduction, the building blocks of an entity relationship diagram, classification of entity sets, attribute classification, relationship degree, relationship classification, reducing ER diagram to tables, enhanced entity-relationship model (EER model), generalization and specialization, IS A relationship and attribute inheritance, multiple inheritance, constraints on specialization and generalization, aggregation and composition, entity clusters, connection traps, advantages of ER modeling.

MID-II

UNIT III

Relational Model: Introduction, CODD Rules, relational data model, concept of key, relational integrity, relational algebra, relational algebra operations, advantages of relational algebra, limitations of relational algebra, relational calculus, Tuple relational calculus, domain relational Calculus (DRC), QBE.

Normalization: Normalization, the need for Normalization, Normalization Process: Conversion in to First Normal Form, Conversion in to Second Normal form, Conversion into third Normal form.

UNIT IV

Structured Query Language: Introduction, History of SQL Standard, Commands in SQL, Data Types in SQL, Data Definition Language, Selection Operation, Projection Operation, Aggregate functions, Data Manipulation Language, Table Modification Commands, Table Truncation, Imposition of Constraints, Join Operation, Set Operation, View, Sub Query, Embedded SQL.

(P.T.O)

UNIT V

PL/SQL: Introduction, Shortcoming in SQL, Structure of PL/SQL, PL/SQL Language Elements, Data Types, Operators Precedence, Control Structure, Steps to Create a PL/SQL, Program, Iterative Control, Cursors, Steps to create a Cursors, Procedure, Function, Packages, Exceptions Handling, Database Triggers, Types of Triggers.

Prescribed Book:

1. Fundamentals of Relational Database Management Systems by S. Sumathi, S. Esakkirajan, Springer Publications

Reference Books:

1. "Database System Concepts" by Abraham Silberschatz, Henry Korth, and S. Sudarshan, McGrawhill, 2010,
2. "Database Management Systems" by Raghu Ramakrishnan, McGrawhill, 2002,
3. "An Introduction to Database Systems" by Bipin C Desai
4. "Principles of Database Systems" by J. D. Ullman
5. "Fundamentals of Database Systems" by R. Elmasri and S. Navathe

Student Activity:

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

GUIDELINES TO THE PAPER SETTER BLUE PRINT

Unit no	Essay Questions	Short Answer Questions
I	3 (Section-A)	1
II	2 (Section-A)	2
III	2 (Section-B)	1
IV	2 (Section-B)	2
V	1 (Section-B)	2

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M. Sli

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SRI Y.N COLLEGE (AUTONOMOUS): NARSAPUR
III B.Sc., (Computer Science): V Semester under CBCS w.e.f 2017-18
PAPER-V
DATABASE MANAGEMENT SYSTEM
V SEMESTER

Time: 3 Hours

Max. Marks: 75

NOTE: 1. Answer Any FIVE Questions by choosing at least two from Section-A and Section-B
2. Each one carries 10 marks.

5X10=50

SECTION-A

1. Essay Question from Unit-1.
2. Essay Question from Unit-1.
3. Essay Question from Unit-1.
4. Essay Question from Unit-2.
5. Essay Question from Unit-2.

SECTION-B

6. Essay Question from Unit-3.
7. Essay Question from Unit-3.
8. Essay Question from Unit-4
9. Essay Question from Unit-4.
10. Essay Question from Unit-5.

SECTION-C

Note: 1. Answer any FIVE questions from the following.
2. Each one Carries 5 Marks.

5X5=25

11. Short Answer Question from Unit-1.
12. Short Answer Question from Unit-2
13. Short Answer Question from Unit-2.
14. Short Answer Question from Unit-3.
15. Short Answer Question from Unit-4.
16. Short Answer Question from Unit-4.
17. Short Answer Question from Unit-5.
18. Short Answer Question from Unit-5.

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A. Nagababu *Ravi*



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PRACTICAL SYLLABUS PAPER – V
DATABASE MANAGEMENT SYSTEM
SEMESTER-V

DATABASE MANAGEMENT SYSTEMS LAB

1. Draw ER diagrams for train services in a railway station.
2. Draw ER diagram for hospital administration.
3. Creation of college database and establish relationships between tables.
4. Write a view to extract details from two or more tables.
5. Write a stored procedure to process student's results.
6. Write a program to demonstrate a function.
7. Write a program to demonstrate blocks, cursors & database triggers.
8. Write a program to demonstrate Joins.
9. Write a program to demonstrate of Aggregate functions.
10. Creation of Reports based on different queries
11. Usage of file locking table locking, facilities in applications.

PRACTICAL BREAK UP OF MARKS:

5. Procedure/Steps -	10 Marks
6. Execution -	20 Marks
7. Practical Record -	10 Marks
8. Viva -	10 Marks

Total 50 Marks

K. Lail *G. Saranya*

A. Nagesh

[Signature]

[Signature]

Ravi

M. Sri

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III B.Sc. (Computer Science): V Semester under CBCS w.e.f 2017-2018
THEORY PAPER – VI
SOFTWARE ENGINEERING

MID-I

UNIT-I

INTRODUCTION: Software-Types of Software-Software Characteristics- What is Software Engineering-Software Development Life Cycle- Layers in Software Engineering-Software Engineering Process Paradigms-The Waterfall Model, The Spiral Model, The Iterative Model.

UNIT-II

REQUIREMENT ANALYSIS: Requirement Engineering Processes- Feasibility Study-Problem of Requirements-Types of Requirements-Software Requirement Analysis-Analysis Concepts and Principles-Analysis Process-Analysis Model.

MID-II

UNIT-III

SOFTWARE DESIGN: Software Design Process- Abstraction-Modularity-Software Architecture-Effective Modular Design-Cohesion and Coupling-Architectural design and Procedural design- Data flow oriented design. User Interface Analysis Design, Interface Analysis, Interface Design Steps - Human Factors - Human Computer interaction - Computer Interface design - Interface Standards.

UNIT-IV

SOFTWARE QUALITY AND TESTING:

Software Quality Assurance: Elements of Software Quality Assurance- Quality metrics-Software Reliability.

Software testing-Path testing-Control Structures testing-Black Box testing-Integration, Validation and System testing.

Software Maintenance: Reverse Engineering and Re-Engineering.

UNIT-V

PROJECT MANAGEMENT:

Project Management: The Management Spectrum-People, Product, Process, Project.

Software Project Estimation: Resources-Empirical estimation Models- The COCOMO II Model-Planning.

Risk Analysis: Software Risks-Risk Identification-Risk Projection-Risk Refinement-Risk Mitigation, Monitoring and Management-The RMMM Plan.

Software Project Scheduling: Basic principles-The Relationship between People and Effort-Effort distribution-Scheduling.

(P.T.O)

REFERENCE BOOKS:

1. Roger Pressman S., "Software Engineering: A Practitioner's Approach", 7th Edition, McGraw Hill, 2010.
2. Software Engineering Principles and Practice by Deepak Jain Oxford University Press
3. Sommerville, "Software Engineering", Eighth Edition, Pearson Education, 2007.
4. Pfleeger, "Software Engineering: Theory & Practice" 3rd Edition, Pearson Education, 2009.
5. Carlo Ghazi, Mehdi Jazayari, Dino Mandrioli, " Fundamentals Of Software Engineering", Pearson Education, 2003.

GUIDELINES TO THE PAPER SETTER

BLUE PRINT

Unit No.	Essay Questions	Short Answer Questions
I.	03 (Section-A)	Nil (Section-C)
II.	02 (Section-A)	02 (Section-C)
III.	02 (Section-B)	02 (Section-C)
IV.	02 (Section-B)	02 (Section-C)
V.	01 (Section-B)	02 (Section-C)

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K. Sreed

G. Sreedhar

B. Chitra

[Signature]

[Signature]

M. Sri

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SRI Y.N COLLEGE (AUTONOMOUS): NARSAPUR
III B.Sc., (Computer Science): V Semester under CBCS w.e.f 2017-18
PAPER-VI
Software Engineering
V SEMESTER

Time: 3 Hours

Max. Marks: 75

- NOTE: 1. Answer Any FIVE Questions by choosing at least two from Section-A and Section-B**
2. Each one carries 10 marks.

5X10=50

SECTION-A

1. Essay Question from Unit-1.
2. Essay Question from Unit-1.
3. Essay Question from Unit-1.
4. Essay Question from Unit-2.
5. Essay Question from Unit-2.

SECTION-B

6. Essay Question from Unit-3.
7. Essay Question from Unit-3.
8. Essay Question from Unit-4
9. Essay Question from Unit-4.
10. Essay Question from Unit-5.

SECTION-C

- Note: 1. Answer any FIVE questions from the following.**
2. Each one Carries 5 Marks.

5X5=25

11. Short Answer Question from Unit-2.
12. Short Answer Question from Unit-2
13. Short Answer Question from Unit-3.
14. Short Answer Question from Unit-3.
15. Short Answer Question from Unit-4.
16. Short Answer Question from Unit-4.
17. Short Answer Question from Unit-5.
18. Short Answer Question from Unit-5.

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K. Lil G. Deepansu *P. Shan* *Ravi*
A. Nageswari *H. Sri*



Batch 2019-22
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III B.Sc. (Computer Science): V Semester under CBCS w.e.f 2017-2018
SOFTWARE ENGINEERING LAB

PROJECT & VIVA-VOCE

The objective of the project is to motivate them to work in emerging/latest technologies, help the students to develop ability, to apply theoretical and practical tools/techniques to solve real life problems related to industry, academic institutions and research laboratories.

The project is of 2 hours/week for V & VI semester duration and a student is expected to do planning, analyzing, designing, coding, and implementing the project. The initiation of project should be with the project proposal. The synopsis approval will be given by the project guides.

The project proposal should include the following:

- Title
- Objectives
- Input and output
- Details of modules and process logic
- Limitations of the project
- Tools/platforms, Languages to be used
- Scope of future application

The Project work should be either an individual one or a group of not more than three members and submit a project report at the end of the semester. The students shall defend their dissertation in front of experts during viva-voce examinations.

Angala K. Lail

G. Jayaram

M. Jini

Ravi

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B. Chinnu Chandra Sekhara

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Batch 2019-2022
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III B.Sc., (Computer Science): VI Semester under CBCS w.e.f. 2017-2018
THEORY PAPER – VII
Web Technologies
SEMESTER-VI

MID-I

UNIT – I

HTML: Basic HTML, Document body, Text, Hyper links, adding more formatting, Lists, Tables using images. More HTML: Multimedia objects, Frames, Forms towards interactive, HTML document heading detail.

UNIT – II

Cascading Style Sheets: Introduction, using Styles, simple examples, your own styles, properties and values in styles, style sheet, formatting blocks of information, layers.

MID-II

UNIT – III

Introduction to JavaScript: What is DHTML, JavaScript, basics, variables, string manipulations, mathematical functions, statements, operators, arrays, functions; **Objects in JavaScript:** Data and objects in JavaScript, regular expressions, Exception handling

UNIT – IV

DHTML with JavaScript: Data validation, opening a new window, messages and confirmations, the status bar, different frames, rollover buttons, moving images.

UNIT – V

XML: defining data for web applications, basic XML, document type definition, presenting XML, document object model, Web Services.

Prescribed book:

1. **Web programming: Building Internet Applications**, by **Chris Bates**, Second Edition, Wiley Publications.

References:

1. Harvey M. Deitel and Paul J. Deitel, "**Internet & World Wide Web How to Program**", 4/e, Pearson Education.
2. Uttam Kumar Roy, **Web Technologies** from Oxford University Press

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A. Srinivasan M. Jothi
Ravi

B. Chitra Chandra Srinivasan

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**GUIDELINES TO THE PAPER SETTER
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Unit no	Essay Questions	Short Answer Questions
I	3 (Section-A)	1
II	2 (Section-A)	2
III	3 (Section-B)	1
IV	1 (Section-B)	2
V	1 (Section-B)	2

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A. Nagalakshmi *M. Jothi*

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THEORY PAPER – VII
Web Technologies

Time: 3 Hours

Max.Marks: 75

Note: 1. Answer Any FIVE Questions by choosing at least two from Section-A and Section-B.
2. Each one carries 10 marks.

5X10 =50M

SECTION-A

1. Essay Question From Unit-1
2. Essay Question From Unit-1
3. Essay Question From Unit-1
4. Essay Question From Unit-2
5. Essay Question From Unit-2

SECTION-B

6. Essay Question From Unit-3
7. Essay Question From Unit-3
8. Essay Question From Unit-3
9. Essay Question From Unit-4
10. Essay Question From Unit-5

SECTION-C

Answer any FIVE of the following. Each question carries 5Marks.

5x5=25M

11. Short Answer Question from Unit-1
12. Short Answer Question from Unit-2
13. Short Answer Question from Unit-2
14. Short Answer Question from Unit-3
15. Short Answer Question from Unit-4
16. Short Answer Question from Unit-4
17. Short Answer Question from Unit-5
18. Short Answer Question from Unit-5

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K. Sridhar G. abeeyan, *P. Sankar*, *Ravi*
A. Nagababu, *M. Ti*

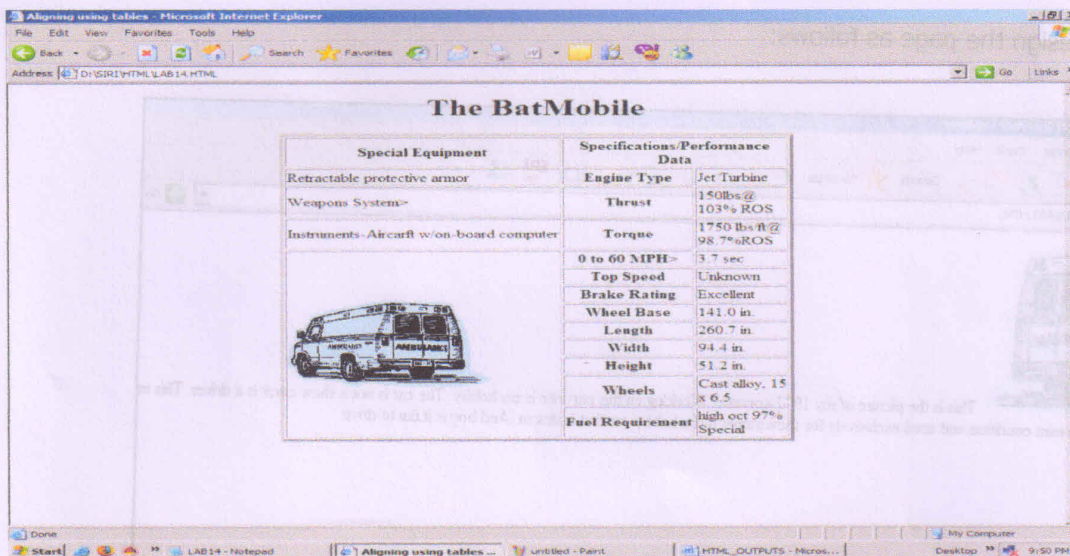


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III B.Sc., (Computer Science): V Semester under CBCS w.e.f 2017-2018
PRACTICAL SYLLABUS PAPER – VII
WEB TECHNOLOGIES LAB
SEMESTER-VI

PAPER-VII

WEB TECHNOLOGIES LAB

1. Write a HTML program illustrating text formatting.
2. Illustrate font variations in your HTML code.
3. Prepare a sample code to illustrate links between different sections of the page.
4. Create a simple HTML program to illustrate three types of lists.
5. Embed a calendar object in your web page.
6. Create an applet that accepts two numbers and perform all the arithmetic operations on them.
7. Create nested table to store your curriculum.
8. Create a form that accepts the information from the subscriber of a mailing system.
9. Design the page as follows:

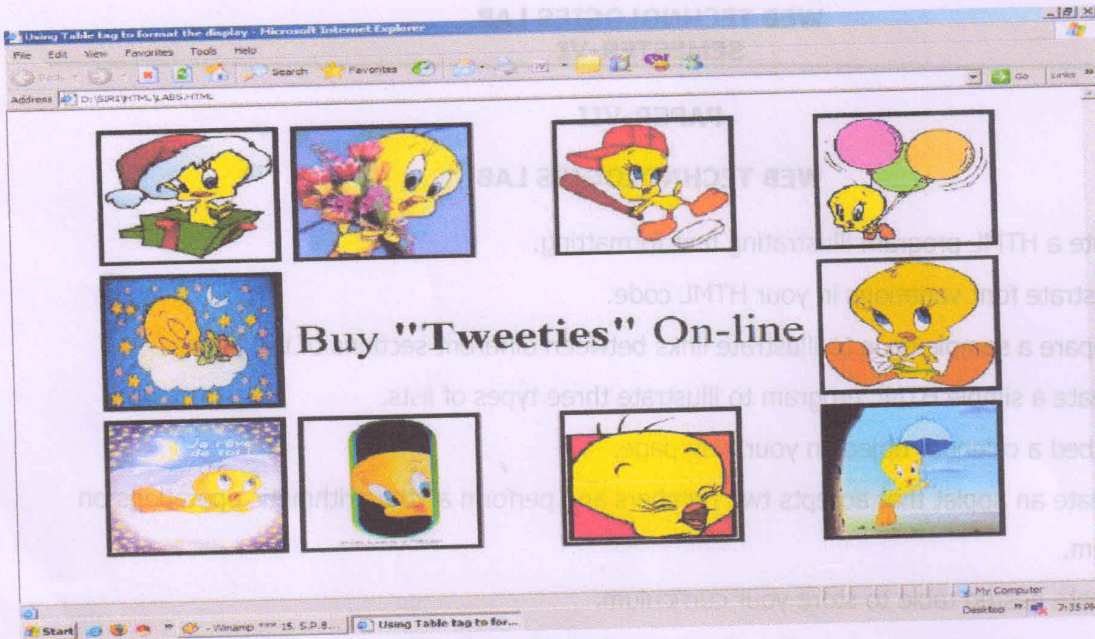


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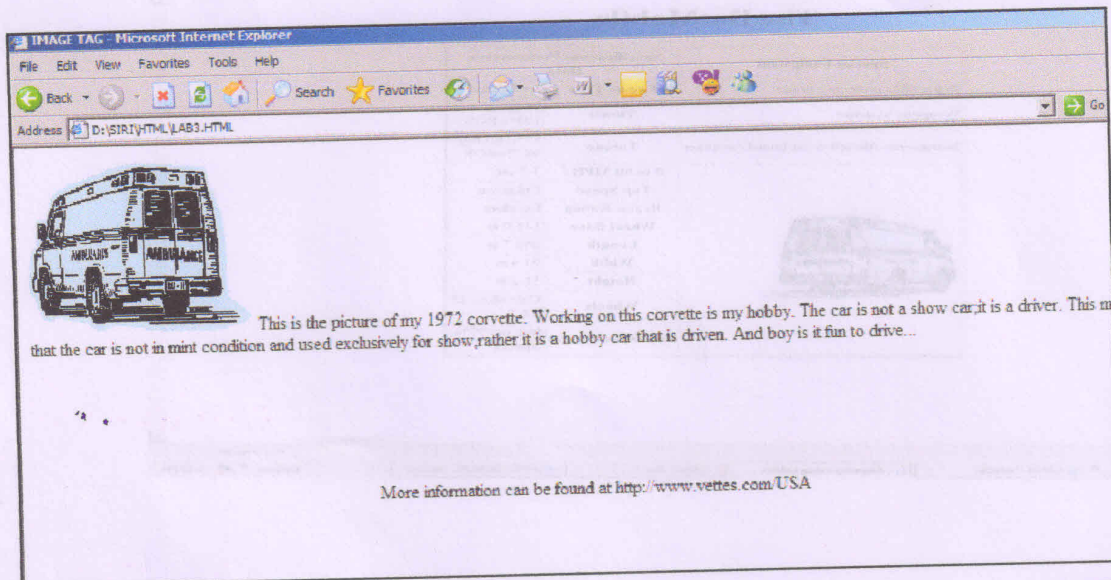
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(P.T.O)

10. Using "table" tag, align the images as follows:



11. Design the page as follows:



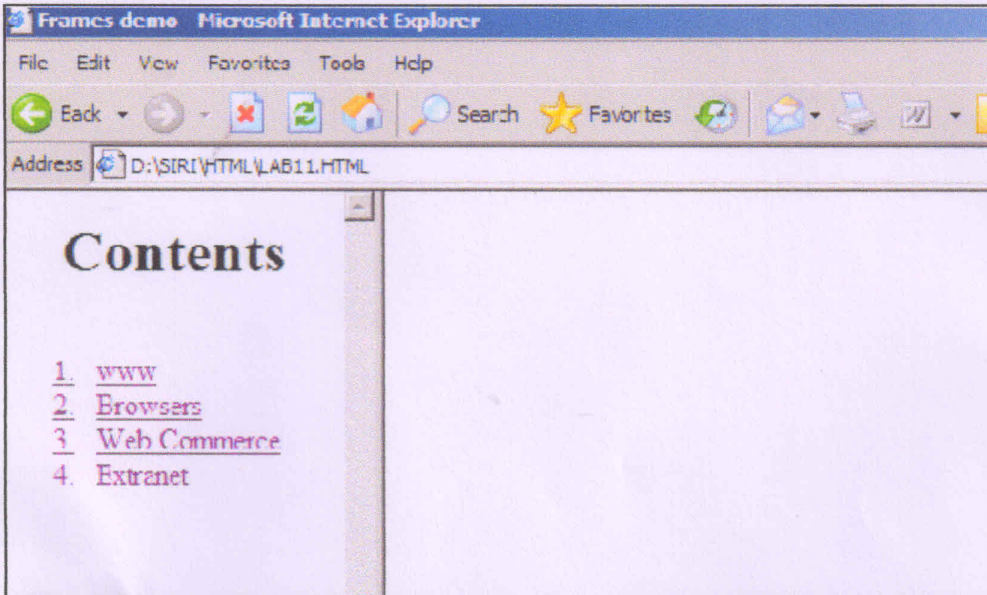
A. Nagalakshmi
K. Sindhu
G. Deepa
M. Thiya
Ravi

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NARSAPUR - 534 275, W.G.Dt.,

12. Illustrate the horizontal rulers in your page.

13. Create a help file as follows:



14. Create a form using form tags (assume the form and fields).

15. Create a webpage containing your biodata (assume the form and fields).

16. Write a HTML program including style sheets.

17. Write a HTML program to layers of information in a web page.

18. Create a static webpage.

PRACTICAL BREAK UP OF MARKS:

1. Procedure/Steps -	10 Marks
2. Execution -	20 Marks
3. Practical Record -	10 Marks
4. Viva -	10 Marks

Total 50 Marks

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A. Nagababu M. Thi



Batch 2019-2022
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
III B.Sc. (Computer Science): VI Semester under CBCS w.e.f. 2017-2018
THEORY PAPER – VIII-CE-1
Distributed Systems
SEMESTER-VI

MID-I

UNIT- I:

Introduction to Distributed Computing Systems, System Models, and Issues in Designing a Distributed Operating System, Examples of distributed systems.

UNIT –II:

Features of Message Passing System, Synchronization and Buffering, Introduction to RPC and its models, Transparency of RPC, Implementation Mechanism, Stub Generation and RPC Messages, Server Management, Call Semantics, Communication Protocols and Client Server Binding.

MID-II

UNIT –III:

Introduction, Design and implementation of DSM system, Granularity and Consistency Model, Advantages of DSM, Clock Synchronization, Event Ordering, Mutual exclusion, Deadlock, Election Algorithms.

UNIT -IV:

Task Assignment Approach, Load Balancing Approach, Load Sharing Approach, Process Migration and Threads.

UNIT –V:

File Models, File Accessing Models, File Sharing Semantics, File Caching Schemes, File Replication, Atomic Transactions, Cryptography, Authentication, Access control and Digital Signatures.

Prescribed Book:

1. Pradeep. K. Sinha: " Distributed Operating Systems: Concepts and Design " , PHI, 2007.

Reference Books

1. George Coulouris, Jean Dollimore, Tim Kindberg: "Distributed Systems", Concept and Design, 3rd Edition, Pearson Education, 2005.

GUIDELINES TO THE PAPER SETTER
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Unit no	Essay Questions	Short Answer Questions
I	3 (Section-A)	1
II	2 (Section-A)	3
III	2 (Section-B)	1
IV	2 (Section-B)	2
V	1 (Section-B)	1

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A. K. Galani *K. Dil* *G. G. G. G.* *M. Thi* *Ravi*



Batch 2019-2022
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
III B.Sc. (Computer Science): VI Semester under CBCS w.e.f 2017-18
THEORY PAPER – VIII- CE-1
DISTRIBUTED SYSTEMS

Time: 3 Hours

Max.Marks: 75

Note: 1. Answer Any FIVE Questions by choosing at least two from Section-A and Section-B
2. Each one carries 10 marks. 5X10 =50M

SECTION-A

1. Essay Question from Unit-1
2. Essay Question from Unit-1.
3. Essay Question from Unit-1.
4. Essay Question from Unit-2.
5. Essay Question from Unit-2.

SECTION-B

6. Essay Question from Unit-3.
7. Essay Question from Unit-3.
8. Essay Question from Unit-4.
9. Essay Question from Unit-4.
10. Essay Question from Unit-5.

SECTION-C

Answer any FIVE of the following. Each question carries 5M.

5x5=25M

11. Short Answer Question from Unit-1.
12. Short Answer Question from Unit-2.
13. Short Answer Question from Unit-2.
14. Short Answer Question from Unit-2.
15. Short Answer Question from Unit-3.
16. Short Answer Question from Unit-4.
17. Short Answer Question from Unit-4.
18. Short Answer Question from Unit-5.

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R. Lail *A. Nagendra* *M. Jini* *G. Sreejaya* *R. Sathya* *Ravi*

B. Chitra Chandra
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Batch 2019-2022
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
III B.Sc.(Computer Science): VI Semester under CBCS w.e.f 2017-2018
PRACTICAL SYLLABUS PAPER – VIII: CE-1
DISTRIBUTED SYSTEMS LAB
SEMESTER-VI

III YEAR VI SEMESTER
Paper-VIII: CE-1
Distributed Systems Lab

Objective:

It covers all the aspects of distributed system. It introduce its readers to basic concepts of middleware, states of art middleware technology

Outcomes:

1. Students will get the concepts of Inter-process communication
2. Students will get the concepts of Distributed Mutual Exclusion and Distributed Deadlock Detection algorithm.
 1. To study client server based program using RPC.
 2. To study Client server based program using RMI.
 3. To study Implementation of Clock Synchronization (Logical/Physical)
 4. To study Implementation of Election algorithm.
 5. To study Implementation of Mutual Exclusion algorithms.
 6. To write program multi-threaded client/server processes.
 7. To write program to demonstrate process/code migration.

PRACTICAL BREAK UP OF MARKS:

- | | |
|-----------------------|----------|
| 1. Procedure/Steps - | 10 Marks |
| 2. Execution - | 20 Marks |
| 3. Practical Record - | 10 Marks |
| 4. Viva - | 10 Marks |

Total 50 Marks

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B. Chinnappa

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NARSAPUR - 534 275, W.G.Dt.,

K. L. G. Srinivas
A. Nagappa
M. Thi
Ravi



UNIT-V

Batch 2019-2022
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III B.Sc. (Computer Science): VI Semester under CBCS w.e.f 2017-2018
THEORY PAPER – VIII: CE-2
CLOUD COMPUTING

MID-I

UNIT-I

Cloud Computing Overview- Origins of Cloud Computing-Cloud components- Essential Characteristics-On demand self service-Broad network access-Location independent resource pooling- Rapid Elasticity-Measured Service.

UNIT-II

Cloud Scenarios: Compute Clouds, Cloud Storage, Cloud Applications.

Benefits: Scalability, Simplicity, Vendors, Security.

Limitations- Sensitive information- Application development.

Security concerns- Privacy concern with a third party- Security level of third party-security benefits.

Regularity issues: Government policies.

MID-II

UNIT-III

Cloud architecture: Cloud delivery model- SPI framework, SPI evolution.

Software as a Service (SaaS): SaaS service providers- GoogleApp Engine, Salesforce.com and google platform- Benefits-Operational benefits- Economic benefits- Evaluating SaaS.

Platform as a Service (PaaS): PaaS service providers- Salesforce.com- Services and Benefits.

UNIT-IV

Infrastructure as a Service (IaaS): IaaS service providers- Amazon EC2, Go grid-Benefits.

Cloud deployment model: Public clouds- Private clouds- Community clouds- Hybrid Clouds- Advantages of Cloud Computing.

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UNIT-V

Virtualization: Virtualization and Cloud Computing- Need of Virtualization- Cost, administration, fast deployment, reduce infrastructure cost- limitations.

Types of hardware virtualization: Full virtualization- partial virtualization- Para virtualization.

Desktop Virtualization: Software virtualization- Memory virtualization- Storage virtualization- Data Virtualization- Network Virtualization.

Microsoft Implementation: Microsoft Hyper V- Vmware features and infrastructure- Virtual Box- Thin Client.

Reference Books:

1. Cloud Computing a practical approach- Anthony T.Velte, Toby J. Velte Robert Elsenpeter TATA McGraw- Hill, New Delhi-2010.
2. Cloud Computing: Web-based Applications That Change the way you Work and Collaborate Online-Michael Miller-Que 2008.
3. Cloud Computing, Theory and Practice, Dan C Marinescu, MK Elsevier.
4. Cloud Computing, A Hands on approach, Arshadeep Bahga, Vijay Madiseti, University Press.
5. Mastering Cloud Computing, Foundations and Application Programming, Raj Kumar Buyya, Christenvecctiola, S Tammarai selvi, TMH.

GUIDELINES TO THE PAPER SETTER

BLUE PRINT

Unit No.	Essay Questions	Short Answer Questions
I.	3 (Section-A)	2 (Section-C)
II.	2 (Section-A)	3 (Section-C)
III.	2 (Section-B)	1 (Section-C)
IV.	2 (Section-B)	1 (Section-C)
V.	1 (Section-B)	1 (Section-C)

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A. Nagaraj
K. L. L. L.
G. S. S. S.
M. J. J. J.
K. V. V. V.



Batch 2019-2022
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
III B.Sc. (Computer Science): VI Semester under CBCS w.e.f 2017-18
THEORY PAPER – VIII: CE-2
CLOUD COMPUTING

Time: 3 Hours

Max.Marks: 75

Note: 1. Answer Any FIVE Questions by choosing at least two from Section-A and Section-B

2. Each one carries 10 marks.

5 X10 =50M

SECTION-A

1. Essay question from Unit-I.
2. Essay Question from Unit-I.
3. Essay Question from Unit-I.
4. Essay Question from Unit-II.
5. Essay Question from Unit-II.

SECTION-B

6. Essay Question from Unit-III.
7. Essay Question from Unit-III.
8. Essay Question from Unit-IV.
9. Essay Question from Unit-IV.
10. Essay Question from Unit-V.

SECTION-C

Note: 1. Answer any Five questions from the following.

2. Each one carries 5 marks

5 x 5= 25M

11. Short Question from Unit-I.
12. Short Question from Unit-I.
13. Short Question from Unit-II.
14. Short Question from Unit-II.
15. Short Question from Unit-II.
16. Short Question from Unit-III.
17. Short Question from Unit-IV.
18. Short Question from Unit-V.

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[Handwritten signatures: R. L. L., G. Srinivas, P. S. S., Ravi, A. N. N., M. H. H.]

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Batch 2019-2022
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
III B.Sc. (Computer Science): VI Semester under CBCS w.e.f 2017-18
THEORY PAPER – VIII: CE-2
CLOUD COMPUTING LAB

1. Introduction to cloud computing.
2. Creating a Warehouse Application in Sales Force.com.
3. Creating an Application in Sales Force.com using Apex programming Language.
4. Implementation of SOAP web services in C#/ JAVA Applications.
5. Implementation of Para- Virtualization using VM ware's workstation/ Oracle's Virtual Box and Guest O.S.
6. Case study: PAAS (Face book, Google App Engine)
7. Case Study: Amazon web services.

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K. Lail G. Deepapuri
A. Nagalakshmi
M. Jaisri
Ravi



Batch 2019-2022
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
III B.Sc. (Computer Science): V Semester under CBCS w.e.f 2017-2018
THEORY PAPER – VIII-CE-3

PROJECT-2
SEMESTER-VI
PROJECT-2

Follow SDLC process for real time applications and develop real time application project

The objective of the project is to motivate them to work in emerging/latest technologies, help the students to develop ability, to apply theoretical and practical tools/techniques to solve real life problems related to industry, academic institutions and research laboratories.

The project is of 2 hours/week for one (semester VI) semester duration and a student is expected to do planning, analyzing, designing, coding, and implementing the project. The initiation of project should be with the project proposal. The synopsis approval will be given by the project guides.

The project proposal should include the following:

Title

Objectives

Input and output

Details of modules and process logic

Limitations of the project

Tools/platforms, Languages to be used

Scope of future application

The Project work should be either an individual one or a group of not more than three members and submit a project report at the end of the semester. The students shall defend their dissertation in front of experts during viva-voce examinations.

PROJECT BREAK UP OF MARKS:

- | | | |
|------------------------|---|--|
| 1. Internal assessment | - | 25 Marks (Project abstract & Reviews) |
| 2. External assessment | - | 75 Marks (Project submission and execution) |
| 3. Viva -voce | | 50 Marks |

Total ----- 150 Marks -----

[Handwritten signatures of project guides]

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Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc., B.A., B.Com., B.B.A., B.C.A., II Semester under CBCS w.e.f 2020-2021
LIFE SKILL COURSE
INFORMATION AND COMMUNICATION TECHNOLOGY
SEMESTER-II

UNIT-I: (08 hrs)

Fundamentals of Internet: What is Internet?, Types of Networks, Network topologies, Internet applications, Internet Addressing – Entering a Web Site Address, URL–Components of URL, Searching the Internet, Browser–Types of Browsers, Introduction to Social Networking: Twitter, Tumblr, LinkedIn, Facebook, flickr, Skype, yahoo, YouTube, WhatsApp.

UNIT-II: (08 hrs)

E-mail: Definition of E-mail -Advantages and Disadvantages –User Ids, Passwords, Email Addresses, Domain Names, Mailers, Message Components, Message Composition, Mail Management; Searching WWW- Search Engines and examples; G-Suite: Google drive, Google documents, Google spread sheets, Google Slides and Google forms.

UNIT-III: (10 hrs)

Overview of Internet security: Overview of Internet Security, E-mail threats and secure E-mail, Viruses and antivirus software, Firewalls, Cryptography, Digital signatures, Copyright issues. What are GOI digital initiatives in higher education? (SWAYAM, Swayam Prabha, National Academic Depository, National Digital Library of India, E-Sodh-Sindhu, Virtual labs, e- acharya, e-Yantra and NPTEL).

Reference Books:

1. In-line/On-line : Fundamentals of the Internet and the World Wide Web, 2/e – by Raymond Greenlaw and Ellen Hepp, Publishers : TMH
2. Internet technology and Web design, ISRD group, TMH.
3. Information Technology – The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.

Guidelines to the Paper Setter
Blue Print

Unit No	Essay Questions	Short Answer Questions
I	2 (Section-A)	3 (Section-B)
II	2 (Section-A)	2 (Section-B)
III	1 (Section-A)	3 (Section-B)

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Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
I B.Sc., B.A., B.Com., B.B.A.,B.C.A., II Semester under CBCS w.e.f 2020-2021
LIFE SKILL COURSE
INFORMATION AND COMMUNICATION TECHNOLOGY
SEMESTER-II

ADDITIONAL INPUTS

S.No	Topics Reviewed	Topics Added	Justification
1.	Unit-1:	Types of Networks, Network topologies	Add to impart in depth knowledge on the specific topics

K. Laila
A. Nagaraj
G. Subramanyam
M. Jli
Ravi

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B. Chitra Lakshmi
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Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
LIFE SKILL COURSE
INFORMATION AND COMMUNICATION TECHNOLOGY
II Semester under CBCS w.e.f 2020-2021
(Common for all II SEMESTER B.A./B.Com./B.Sc./B.B.A., COURSES)

- NOTE:** 1. Answer any Three of the following
2. Each one carries 10 marks

3X10=30M

SECTION – A

1. Essay Question from **Unit-1**
2. Essay Question from **Unit-1**
3. Essay Question from **Unit-2**
4. Essay Question from **Unit-2**
5. Essay Question from **Unit-3**

SECTION – B

- NOTE:** 1. Answer any Four of the following
2. Each one carries 5 Marks.

4X5=20M

6. Short Answer Question from **Unit-1**
7. Short Answer Question from **Unit-1**
8. Short Answer Question from **Unit-1**
9. Short Answer Question from **Unit-2**
10. Short Answer Question from **Unit-2**
11. Short Answer Question from **Unit-3**
12. Short Answer Question from **Unit-3**
13. Short Answer Question from **Unit-3**

Note: Please prepare the question Paper in both English medium and Telugu medium.

[Handwritten signatures: A. Nagababu, K. L. G. Srinivas, Ravi, M. Thi]

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NARSAPUR - 534 275, W.G.Dt.,**



Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
Certificate Course
Basic Computer Applications
I SEMESTER under CBCS w.e.f 2021-2022
(Common for all I SEMESTER B.A./B.Com./B.Sc./B.B.A.,/B.C.A., COURSES)

Objectives:

This course aims at providing exposure to students in skill development towards basic office applications.

Course Learning Outcomes:

After successful completion of the course, student will be able to:

1. Demonstrate basic understanding of computer hardware and software.
2. Apply skills and concepts for basic use of a computer.
3. Identify appropriate tool of MS office to prepare basic documents, charts, spreadsheets and presentations.
4. Create personal, academic and business documents using MS office.
5. Create spreadsheets, charts and presentations.
6. Analyze data using charts and spread sheets.

Unit-I: (08 hrs)

Basics of Computers: Definition of a Computer - Characteristics of computers, Applications of Computers - Block Diagram of a Digital Computer - I/O Devices, hardware, software human ware, application software, system software, Memories - Primary, Auxiliary and Cache Memory. MS Windows - Desktop, Recycle bin, My Computer, Documents, Pictures, Music, Videos, Task Bar, Control Panel.

Unit-II: (08 hrs)

MS-Word: 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, Mail Merge.

Unit-III: (10 hrs)

MS-Excel: Overview of Excel features - Creating a new worksheet, Selecting cells, Entering and editing Text, Numbers, Inserting Rows/Columns - Changing column widths and row heights, Formulae, Referencing cells, Changing font sizes and colors, Insertion of Charts, Auto fill, Sort.

MS-PowerPoint: Features of PowerPoint - Creating a Presentation - 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.

(P.T.O)

RECOMMENDED CO-CURRICULAR ACTIVITIES: (04 hrs)

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

1. Assignments (in writing and doing forms on the aspects of syllabus content and outside a. the syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity))
3. Quiz, Group Discussion
4. Solving MCQ's available online.
5. Suggested student hands on activities:
 - Create two folders, Rename the folder, create two files each using notepad and paint, move the files from one folder to another folder, delete a file you have created, copy and paste text within notepad.
 - Create a letter head for your college with watermark, your resume, visiting card, brochure for your college activity, organization chart for your college, any advertisement, Prepare your Class time table.
 - Prepare your mark sheet, Prepare your class time table, Prepare a salary bill for an organization, Sort the bill as per the alphabetical order of the names, Get online weather data and analyze it with various charts.
 - Create a PowerPoint presentation for a student seminar.

REFERENCE BOOKS:

1. Working in Microsoft Office – Ron Mansfield - TMH.
2. MS Office 2007 in a Nutshell –Sanjay Saxena – Vikas Publishing House.
3. Excel 2020 in easy steps-Michael Price – TMH publications

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[Handwritten signatures]
R. S. L. G. Jayaram
A. Nagalakshmi
M. J. S.



Batch 2021-24
SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR
Certificate Course
Basic Computer Applications
I SEMESTER under CBCS w.e.f 2021-2022
(Common for all I SEMESTER B.A./B.Com.Gen./B.Sc./B.B.A., COURSES)

- NOTE:** 1. Answer any Three of the following
2. Each one carries 10 marks

3X10=30M

SECTION – A

1. Essay Question from **Unit-1**
2. Essay Question from **Unit-1**
3. Essay Question from **Unit-2**
4. Essay Question from **Unit-2**
5. Essay Question from **Unit-3**

SECTION – B

- NOTE:** 1. Answer any Four of the following
2. Each one carries 5 Marks.

4X5=20M

6. Short Answer Question from **Unit-1**
7. Short Answer Question from **Unit-1**
8. Short Answer Question from **Unit-1**
9. Short Answer Question from **Unit-2**
10. Short Answer Question from **Unit-2**
11. Short Answer Question from **Unit-3**
12. Short Answer Question from **Unit-3**
13. Short Answer Question from **Unit-3**

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K. Srinivas *A. Nagaraj* *M. J. Srinivas* *Srinivas*

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