SIR C R REDDY COLLEGE FOR WOMEN

B.Sc. Computer Science_Isem_syllabus.

pdf. Computer Science_IIsem_2016-17AB.pdfComputer Science III Semester syllabus.pdfCS_IVsem_2015-16AB_UPDATED.pdfComputer Science_Vsem_2015-16AB.pdf

Computer Science_VIsem_2015-16ab_final Dec.pdf

SIR C R REDDY COLLEGE FOR WOMEN

CBCS / Semester System (W.e.f2018-2019AdmittedBatch)

B.Sc.Computer Science, B.A.,
B.Com(ComputerApplications)& BCA
I Semester Syllabus

COMPUTERFUNDAMENTALS ANDPHOTO SHOP

BSc	Semester: I	Credits: 4
Course: 06	COMPUTER FUNDAMENTALS AND PHOTO SHOP	Hrs/Wk.: 4

Aim and objectives of Course:

- This course is designed to learn about computerfundamentals.
- To learn best photo editing software tools to enhance employability skills.

Course outcomes:

After the successful completion of course, the student should have through knowledge about:

- Computer Fundamentals like Computer software, hardware, input and outputdevices.
- Memories andwindowsenvironment.
- Design A Logo, To Remove Background fromPhoto s
- To Create Digital Art, GIFAnimations
- To Create Remove Distractions FromImages.

UNIT-I: **12Hrs**

Introduction to computers: Characteristics and limitations of computer, Block diagram of computer, types of computers, uses of computers, computergenerations.

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

UNIT-II: 12Hrs

Inputand Outputdevices: Keyboardand mouse, inputting data inother ways, Pointing Devices, H andheld Devices, Optical Devices, Audio-Visual Input Devices, Output Devices: Monitors, Projectors, Speakers, Printers, Plotters.

Types of Software: system software, Application software, commercial, open source, domain and freeware software .

Memories: Primary, Secondary andcache memory. Secondary Storage Devices: Magnetic Tapes, FloppyDisks, Hard Disks.

Windows basics: Start menu, icons, MS Windows-Desktop, My Computer, My Documents, Pictures, Music, Videos, Recycle Bin, and Task Bar-Control Panel.

Unit–III12Hrs

Introductionto Adobe photo shop: Getting started with photo shop, creating and saving a document inphoto shop, page layout and back ground, photo shop program window-title bar, menu bar, option bar, image window, image title bar, status bar, ruler, palettes, to ol box screen modes, saving files, reverting files, closing files.

Unit–IV12Hrs

Images: working with images, image sizeandresolution, image editing, colormodes and adjustments, Zooming& Panning an Image, Rulers, Guides & Grids- Cropping & Straightening an Image, imagebackgrounds, makingselections.

Working with tool box: working with pen tool, save and load selection-working with erasers-workingwithtextand brushes-Color manipulations: colormodes-LevelsCurves SeeingColoraccurately Patch tool – Cropping-Reading your palettes - Dust and scratches- Advanced Retouching- smoothing skin.

Unit-V12Hrs

Layers: Workingwithlayers-layerstyles-opacity-adjustmentlayers

Filters: The filter menu, working with filters- Editing your photo shoot, presentation–how to createadds, artistic filter, blur filter, brush store filter, distort filters, noise filters, pixelate filters, light effects, difference clouds, sharpen filters, printing.

Menus: purpose of menus –new file- open file- print file – copyingdata – cut data- paste data- saving custom shape-working with modes-define brushes.

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

ReferenceBooks:

1. Fundamentals of Computers by Reema Thareja from Oxford University Press
2. Adobe Photo shop Class Room in a Book by Adobe Creative Team.
3. Photo shop: Beginner's Guide for Photoshop- Digital Photo graphy, Photo Editing, Color Grading & Graphic...19February2016 by David Maxwell.

Suggested Activities:

Seminar/ Quiz/ Assignment/ Group Discussion/ Power Point Presentation.

Web Link:

https: //youtu.be/fNWda_fTozQ

SIR C R REDDY COLLEGE FOR WOMEN

PRACTICAL SYLLABUSPHOTO SHOP

BSc	Semester: I	Credits: 1
Course: 06	COMPUTER FUNDAMENTALS AND PHOTO SHOP LAB	Hrs/Wk.: 2

1. Create your Visiting card
2. Create Cover page for any text book
3. Create a Paper add for advertising of any commercial agency
4. Design a Passport photo
5. Create a Pamphlet for any program to be conducted by an organization
6. Create Broacher for your college
7. Create Titles for any for the coming film
8. Custom shapes creation
9. Create a Web template for your college
10. Convert color photo to black and white photo
11. Enhance and reduce the given Image size
12. Background changes
13. Design Box package cover
14. Design Texture and patterns
15. Filter effects &Eraser effects

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper
I SEMESTER PART –II COMPUTER SCIENCE
(w.e.f.2018-2019)
B.Sc. Computer Science, B.A., B.Com. (Computer Applications) & BCA

COMPUTER FUNDAMENTALS ANDPHOTO SHOP

SECTION – A

Time: 3Hours Max Marks: 75

Answer any **FIVE** questions. **5X5=25M**

1. Explain the block diagram ofcomputer with neatdiagram.
2. Write short notes outputdevices.
3. How to save a Photo shopfile?
4. Write about dust andscratches filter inPhoto shop.
5. What are layers? What are the advantages oflayers?
6. Explain different icons on desktop.
7. How to create a new document inPhoto shop?
8. What is Patch tool? Explain.

SECTION – B

Answer **ALL** the questions.**5X10=50M**

9. a) Define computer. Write the characteristics and limitations of Computer.

(OR)

b) Write different generations of computers.

10. a) What is the use of memory? Write a different type of memories.

(OR)

b) What is software? Explain different types of software‘s with examples.

11. a) With a neat diagram, explain parts Photo shop windowcomponents.

(OR)

b) How to change page layouts andbackground inPhoto shop?

12. a) Write about various color modes an adjustmentinPhoto shop.

(OR)

b) Explain about color manipulations, levels curves inPhoto shop.

13. a) Illustrate the Layer style, fill andOpacity.

(OR)

b) Explain lighting effects in Photo shop.

SIR C R REDDY COLLEGE FOR WOMEN

CBCS/SEMESTERSYSTEM

IISEMESTER: B.Sc.ComputerScience/InformationTechnology (IT)

(For 2018-2019admittedbatch)

Paper-II: PROGRAMMING IN C

BSc	Semester: II	Credits: 4
Course: 06	PROGRAMMING IN C	Hrs/Wk: 4

Aimandobjectives of Course:

- This course aims to provide exposure to problem-solving throughprogramming.
- It introduces the concepts of the C Programminglanguage
- Choose a suitable C-construct to develop C code for a givenproblem.
- Recognize the bugs in the Cprogram

Course outcomes:

- Illustrate andexplain the basic computer concepts and programming principles of C language.
- Develop C programs to solve simple mathematical anddecision makingproblems.
- This C programming is used to solve simple engineering problems usinglooping constructs.
- Understand and trace the execution of programs written in Clanguage.
- Write the C code for a givenalgorithm.
- Read andWrite operations are used in files and to develop the files program for reading and writingoperations.

UNITI12Hrs

Chapter1:

Introduction to Algorithms andProgramming Languages: Algorithm – Key features of Algorithms–SomemoreAlgorithms–FlowCharts–Pseudocode–ProgrammingLanguages – Generation of Programming Languages – Structured Programming Language- Designand Implementation of Correct, Efficient and MaintainablePrograms.

Chapter2:

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

UNITII12Hrs

Chapter3:

Decision Control andLooping Statements: Introduction to Decision Control Statements – Conditional Branching Statements–Iterative Statements–Nested Loops– Break and Continue Statement – Go to Statement.

Chapter4: Functions: Introduction–using functions–Function declaration/proto type–Function definition – function call – return statement – Passing parameters – Scope of variables –Storage Classes – Recursive functions – Type of recursion – Towers of Hanoi – Recursion vs Iteration

UNITIII12Hrs

Chapter5:

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.

Chapter6: Strings: Introduction–Suppressive Input–String Taxonomy–String Operations– Miscellaneous String and Character functions

UNITIV12Hrs

Chapter7:

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring PointerVariables – Pointer Expressions and Pointer Arithmetic – Null Pointers – Generic Pointers –Passing Arguments of functions using Pointer–Pointer and Arrays–Passing Array to Function – Difference between Array Name and Pointer – Pointers and Strings – Array of pointers-DynamicMemoryAllocation.

Structure, Union, andEnumeratedDataTypes: Introductionto Structure–NestedStructures – Arrays of Structures – Structures and Functions –Union – Arrays of Union Enumerated Data Types.

UNITV12Hrs

Chapter9:

Files: Introduction to Files – Using Files in C – Reading Data from Files – Writing Data fromFiles–DetectingtheEnd- of -file– Error H andlingduringFileOperations.

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

TextBook

1. Computer Fundamentals and Programming in C by REEMA THAREJA from OXFORD UNIVE RSITY PRESS

REFERENCEBOOKS

1. E. Balaguruswamy: ―COMPUTING FUNDAMENTALS & C PROGRAMMING– TMHI, Second Reprint 2008.
2. Ashok NKamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002.
3. Henry Mullish & HuubertL. Cooper: The Spirit of C, JaicoPub. House, 1996.

StudentActivity:

1. **Write a program for preparing the attendance particulars of students of yourcollegeat the end of semesteraccording to followingguidelines**
   a. **Above75%promoted**
   b. **Above65%condoned**
   c. **Below 65%detained**
2. **Write a program for creating timetable or your class taking work load of facultyinto consideration.**

Suggested Activities:

Seminar/Quiz/Assignment/GroupDiscussion/Power PointPresentation.

Web Link:

https: //youtu.be/XTiIiI-LOY8?list=PLEAYkSg4uSQ2k6GwNhpgSHodGT8wfvgwu

SIR C R REDDY COLLEGE FOR WOMEN

CBCS/SEMESTERSYSTEM

IISEMESTER: B.Sc.Computer Science/InformationTechnology (IT)

(For 2018-2019admittedbatch)

PROGRAMMINGIN CLAB

BSc	Semester: II	Credits: 1
Course: 06	PROGRAMMING IN C LAB	Hrs/Wk.: 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 C program to find the sum of individual digits of a positive integer.
4. A Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and 1. Subsequent terms are found by adding the preceding two terms in the sequence. Write a C program to print the Fibonacci series
5. Write a C program to generate the first n terms of the Fibonacci sequence.
6. Write a C program to generate all the prime numbers between 1 and n, where n is a value supplied by the user.
7. Write a C program to find both the largest and smallest number in a list of integers.
8. Write a C program that uses functions to perform the following:
    a. Addition of Two Matrices
    b. Multiplication of Two Matrices
9. Write a program to perform various string operations
10. Write C program that implements searching of given item in a given list
11. Write a C program to sort a given list of integers in ascending order

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper
II SEMESTER PART –II COMPUTER SCIENCE
(w.e.f.2018-2019)
B.Sc. Computer Science
PROGRAMMINGIN C

SECTION – A

Time: 3Hours Max Marks: 75

Answer any **FIVE** questions.**5X5=25M**

1. Write about Compiler andinterpreter.
2. Write about go to statement with syntax andexample.
3. Write a program to find greatest number of given ‘n’ numbers usingarrays.
4. Explain about pointer inarrays.
5. How to write data from Files withexample?
6. Write the features of C programminglanguage.
7. Write a program in C to generate Fibonacciseries.
8. Write about enumerated data types.

SECTION – B

Answer **ALL** the questions.**5X10=50M**

9. a) Explain about various generations of programminglanguages.

(OR)

b) Write about different types of input and output functions used inC.

10. a)Write aCprogramto calculatethe sum ofdigits of the givennumber‘n’withaneat flowchart.

(OR)

b) What is Recursion? Explain different types of recursion techniques.

11. a) What is an Array? Explain different types of arrays withexamples.

(OR)

b) What is string? Explain various string h andling functions available in C.

12. a) Define and use of a pointer and write a ‘C’ program on swapping of two numbers using pointers.

(OR)

b) Explain about structures andUnions with syntax and examples in detail.

13. a) Explain about file operations indetail.

(OR)

b) Explain about Error H andling during file operations.

SIR C R REDDY COLLEGE FOR WOMEN

CBCS/SEMESTERSYSTEM
(From 2018-19 Admitted Batch)
B.Sc. Computer Science
Semester Syllabus-III
OBJECT ORIENTED PROGRAMMING USING JAVA

BSc	Semester: III	Credits: 4
Course: 06	OBJECT ORIENTED PROGRAMMING USING JAVA	Hrs/Wk: 4

Aim and objectives of Course:

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

Course Outcomes:

After completing this course satisfactorily, a student will be able to:

- Understand the benefits of a well-structuredprogram
- Develop problem-solving and programming skills using OOPconcepts
- Understand the OOP concepts and basics of java programming (Consoleand GUIbased)
- Develop the ability to solve real-world problems throughsoftware development in high-level programming language likeJava
- Develop the ability to extend his knowledge of Java programming further on his/her own.

UNIT-112Hrs

FUNDAMENTALS OF OBJECT – ORIENTED PROGRAMMING: Introduction, Object oriented paradigm, BasicConcepts of OOP, Benefits of OOP, and Applications of OOP.

OVERVIEW OF JAVA LANGUAGE: Introduction, java features Simple Java program structure, difference between C, C++ and java, java and internet, Java to kens, Java Statements, Implementing a Java Program, Java Virtual Machine, Command line arguments.

CONSTANTS, VARIABLES & DATA TYPES: Introduction, Constants, Variables, Data Types, Declaration of Variables, Giving Value to Variables, Scope of variables, Symbolic Constants, Typecasting, Getting Value of Variables, Standard Default values.

UNIT-II **12Hrs**

OPERATORS AND EXPRESSIONS: Arithmetic operators Relational operators, logical operators, Assignment operators, Increment and decrement operators, Conditional operators, Bitwise operators, special operators, precedence of arithmetic operators.

DECISION MAKING & BRANCHING: Introduction, Decision making with if statement, Simple ifstatement, if Else statement, Nesting of if else statements, the else if ladder, the switch statement, the conditional operator.

DECISION MAKING & LOOPING: Introduction, The While statement, the do-whilestatement, thefor statement, Jumpsinloops.

CLASSES, OBJECTS&METHODS: Introduction, Definingaclass, Adding variables, Addingmethods, Creating objects, Accessing class members, Constructors, Method overloading, Static members, Nesting of methods, visibilitycontrols.

UNIT-III12Hrs

INHERITANCE: inheritance and types of inheritances, Extending a class, Overloading methods, Finalvariablesand methods, Finalclasses, Abstractmethodsand classes.

ARRAYS, STRINGSANDVECTO RS: Arrays, One-dimensional arrays, creating an array, Two–dimensional arrays, Strings, Vectors, Wrapper classes.

INTERFACES: MULTIPLEINHERITANCE: Introduction, defining interfaces, extending interfaces, implementing interfaces, Assessing interface variables.

UNIT-IV12Hrs

MULTITHREADED PROGRAMMING: Introduction, Creating Threads, Extending the Threads, Stopping and Blocking a Thread, Lifecycle of a Thread, Using Thread Methods, Thread Exceptions, Thread priority, Synchronization, Implementing the runnable interface.

MANAGING ERRORS AND EXCEPTIONS: Types of errors: Compile-time errors, Run- time errors, Exceptions, Exception handling, Multiple Catch Statements, Using finally Statement.

UNIT-V12Hrs

APPLET PROGRAMMING: local andremote applets, difference between Applets and Applications, Building Applet code, Applet Life cycle: Initialization state, Running state, Idle or stopped state, Dead state, Display state Designing web page, adding applet to HTML file, Running the Applet.

PACKAGES: Introduction, Java API Packages, Using System Packages, Naming conventions, Creating Packages, Accessing a Package, using a Package, Adding class to a package, Hiding classes, static Import.

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

PrescribedBook:

1. E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA Mc Graw Hill Company.

ReferenceBooks:

1. JohnR. Hubbard, Programming with Java, Second Edition, Schaum's outline Series, TMH.
2. Deitel & Deitel. JavaTM: How to Program, PHI(2007)
3. Java Programming: From Problem Analysis to Program Design -D.S Mallik
4. Object oriented Programming Through Java by P. Radha Krishna, Universities Press(2008)
5. Java complete reference

Suggested Activities:

Seminar/Quiz/Assignment/Group Discussion/Power Point Presentation.

Web Link:

https: //youtu.be/J_d1fJy90GYhttps: //youtu.be/J_d1fJy90GY

SIR C R REDDY COLLEGE FOR WOMEN

PRACTICALSYLLABUS

OBJECTORIENTEDPROGRAMMINGUSINGJAVA

OBJECTORIENTEDPROGRAMMINGUSINGJAVALAB

BSc	Semester: III	Credits: 1
Course: 06	**OBJECT ORIENTED PROGRAMMING USING JAVA LAB**	**Hrs/Wk.: 2**

1. Write a program to perform various String Operations
2. Write a program on class and object in java
3. Write a program to illustrate Function Overloading & Function Overriding methods in Java
4. Write a program to illustrate the implementation of abstract class
5. Write a program to implement Exception handling
6. Write a program to create packages in Java
7. Write a program on interface in java
8. Write a program to Create Multiple Threads in Java
9. Write a program to Write Applets to draw the various polygons
10. Write a program which illustrates the implementation of multiple Inheritance using interfaces in Java
11. Write a program to assign priorities to threads in java

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper
III SEMESTER PART –II COMPUTER SCIENCE
(w.e.f.2018-2019)
B.Sc. Computer Science
OBJECT ORIENTED PROGRAMMING USING JAVA

Time: 3Hours Max Marks: 75

SECTION – A

Answer any **FIVE** questions.**5X5=25M**

1. What is typecasting?
2. What is static keyword in java give anexample?
3. What is methodoverloading?
4. What is threadexception?
5. What ispackage?
6. What are javato kens?
7. What is whilestatement?
8. What is command line argument?

SECTION – B

Answer **ALL**thequestions. **5X10=50M**

9. a) Difference between C++ andJava.

(OR)

b) Write about the Applications of oops.

10 a) Explain different data types inJava.

(OR)

b) What is a constructor? Explain different types of constructors.

11 a) What is inheritance? Explain different types of inheritance.

(OR)

b) What is array? Explain different types of arrays.

12. a) Explain about Thread lifecycle.

(OR)

b) Explain concept of Exception h andling.

13. a) Different between applet and applications.

(OR)

b) Explain applet life cycle.

SIR C R REDDY COLLEGE FOR WOMEN

CBCS/SEMESTERSYSTEM

B.Sc.ComputerScience

IVSEMESTER

Paper-IV: DATASTRUCTURES

BSc	Semester: IV	Credits: 4
Course: 06	DATASTRUCTURES	Hrs./Wk.: 4

Aimand objectives of Course:

To introduce the fundamental concept of data structures and to emphasize the importance of data structures in developing and implementing efficient algorithms.

- To introduce the fundamental concept of data structures and to emphasize the importance of various data structures in developing and implementing efficientalgorithms.
- To develop skills to apply appropriate data structures in problemsolving

CourseOutcomes:

After completing this course satisfactorily, a student will be able to:

1. Describe how arrays, records, linked structures, stacks, queues, trees, and graphs arerepresented in memoryand usedby algorithms
2. Describe common applications for arrays, records, linked structures, stacks, queues, trees, and graphs.
3. Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs
4. Demonstratedifferentmethodsfor traversingtrees
5. Compare alternative implementations of data structures with respect to performance
6. Compare and contrast the benefits of dynamic and static data structures implementations
7. Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack.
8. Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing.

UNITI12Hrs

Concept of Abstract Data Types (ADTs) - Data Types, Data Structures, Primitive and Non- primitive Data Structures, Linear and Non-linear Data Structures.

Linear Lists–ADT, Array and Linked representations, Pointers.

Arrays: One Dimensional-Two Dimensional- Multi Dimensional-Operations-Sparse Matrices. Linked Lists: Single Linked List, Double Linked List, Circular Linked List, applications.

UNITII12Hrs

Stacks: Definition, ADT, Array and Linked representations, Implementations and Applications Queues: Definition, ADT, Array and Linked representations, Circular Queues, Dequeues, Priority Queues, Implementations and Applications.

UNITIII12Hrs

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.

UNITIV12Hrs

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

UNIT-V12Hrs

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

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

REFERENCEBOOKS

1. DSMalik, DataStructuresUsingC++, Thomson, IndiaEdition2006.
2. SahniS, Data Structures, Algorithms and Applications in C++, McGraw-Hill, 2002.
3. Samanta, Classic Data Structures, Prentice-Hall of India, 2001.
4. Heilman GI, Data Structures and Algorithms with Object- Oriented Programming, Tata McGraw-l ill. 2002. (ChaptersIand14).
5. TremblayP, and SorensonPG, Introduction to Data Structures with Applications, Tata McGraw-Hill

Studentactivity:

1. **CreateavisiblestackusingC-graphics**
2. **Createa visibleQueueusingC-graphics**

Suggested Activities:

Seminar/Quiz/Assignment/Group Discussion/Power Point Presentation.

Web link:

https: //youtu.be/zWg7U0OEAoE

SIR C R REDDY COLLEGE FOR WOMEN

CBCS/SEMESTERSYSTEM

IVSEMESTER: **B.Sc.ComputerScience/InformationTechnology (IT)**

W.e.f.2018-2019Admitted Batch

DATASTRUCTURESUSING JAVALAB

BSc	Semester: IV	Credits: 1
Course: 06	DATASTRUCTURES LAB	Hrs/Wk: 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 Program 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 for arithmetic expression evaluation
7. Write a program to implement Double Ended Queue using a doubly linked list.
8. Write a program to search an item in a given list using Linear Search and Binary Search
9. Write a program for Quick Sort
10. Write a program for Merge Sort
11. Write a program on Binary Search Tree operations (insertion, deletion and traversals)
12. Write a program for Graph traversals.

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper

IV SEMESTER PART –II COMPUTER SCIENCE

(w.e.f.2018-2019)

B.Sc. Computer Science

DATA STRUCTURES

Time: 3Hours Max Marks: 75

SECTION – A

Answer any **FIVE** questions.**5X5=25M**

1. What are the primitive and non – primitive data structures with anexample?
2. What is priority queue? When they areuseful.
3. Explain about BST.
4. Explain To logical sort with example.
5. Explain linear search algorithm with example.
6. Write about different applications of linkedlists.
7. Write about ADT of Queues.
8. Write different applications of Heap Tree.

SECTION – B

Answer **ALL** the questions.**5X10=50M**

9. a) What is linked list? Explain difference of linked lists in data structures.

(OR)

b) Write all possible operations on single linked list

10. a) What is stack? Write ADT. Explain various operations of stack.

(OR)

b) What is Queue? Explain different types Queues available in data structures.

11. a) Write about different Tree techniques indetail.

(OR)

b) Explain different types of Binary trees with examples.

12. a) What is Graph? Explain various representations of graphics.

(OR)

b) What are the various ways to find minimum spanning Tree? Explain.

13. a) What is searching? Explain Binary Search Algorithm withexample.

(OR)

b) Explain Quick sorting technique with example.

SIR C R REDDY COLLEGE FOR WOMEN

B.A Computer Applications /B.Sc. Computer Science/B. Sc.IT
SyllabusUnder CBCS
W.e.f.2018-2019

III YEAR V SEMESTER
Paper-V: DataBase Management System

BSc	Semester: V	Credits: 4
Course: 06	DataBase Management System	Hrs./Wk: 4

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

CourseOutcomes:

Oncompletingthe subject, students will be ableto :

1. Design and model of data in data base.
2. Store, Retrieve data in data base.
3. Describe the fundamental elements of relational data base management systems.
4. Design ER-models to represent simple data base applicationscenarios.
5. Convert the ER-model to relational tables, populate relational data base and formulate SQL queries on data.
6. Apply query language to populate, update and retrieve data from data base.

UNITI12Hrs

Overview of Database Management System: Introduction, file-based system, Draw backs of file-Based System, Data and information, Database, Database management System, Objectives of DBMS, Evaluation of Database management System, Classification of Database Management System, DBMS Approach, advantages of DBMS, data models, Components and Interfaces of Database Management system. Database Architecture, Situations where DBMS is not necessary.

UNITII12Hrs

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, enhance density- 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 types, advantages of ER modelling.

UNITIII12Hrs

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

UNITIV12Hrs

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, SubQuery, Embedded SQL,

UNITV **12Hrs**

PL/SQL: Introduction, Short coming 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.

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

ReferenceBooks

1. "Database System Concepts" by Abraham Silberschatz, Henry Korth, and S.Sudarshan, McGraw-Hill, 2010, 9780073523323
2. "Database Management Systems" by Raghu Rama krishnan, McGraw-Hill, 2002,
3. Fundamentals of Relational Database Management Systems by S. Sumathi, S. Ekakitaa, Springer Publications
4. "An Introduction to Database Systems" by Bip in CDesai
5. "Principles of Database Systems" by J.D.Ullman
6. "Fundamentals of Database Systems" by R.Elmasri and S.Navathe

StudentActivity:

1. **Create your college data base for placement purpose.**
2. **Create faculty database of your college with their academic performances cores**

Suggested Activities:

Seminar/Quiz/Assignment/Group Discussion/Power Point Presentation.

Web link:

https: //youtu.be/IoL9Ve2SRwQ

https: //youtu.be/v3halp4ankM

SIR C R REDDY COLLEGE FOR WOMEN

B.AComputerApplications /B. Sc.ComputerScience/B.Sc.IT
SyllabusUnderCBCS
W.e.f.2018-2019

III YEAR V SEMESTER DATA BASE MANAGEMENT SYSTEMSLAB

BSc	Semester: V	Credits: 1
Course: 06	Data baseManagementSystem LAB	Hrs./Wk.: 2

1. Draw ER diagrams for train services in a railway station
2. Draw ER diagram for hospital administration
3. Creation of college data base and establish relationships between tables
4. Write a view to extract details from two or more tables
5. Write a stored procedure to process students 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 eJoins
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.

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper
V SEMESTER PART –II COMPUTERSCIENCE
(w.e.f.2018-2019)
B.Sc. Computer Science

Database Management System

Time: 3 Hours Max Marks: 75

SECTION – A

Answer any **FIVE** questions.**5X5=25M**

1. What are the advantages and disadvantages ofDBMS?
2. Explain the concepts of entity and entity set with suitableexample.
3. What are the Advantages of RelationalAlgebra?
4. Explain the selection commandwith anexample.
5. Explain the structure ofPL/SQL.
6. What the components of DBMS?Explain.
7. Explain about setoperations.
8. Explain about sub-queries.

SECTION – B

Answer **ALL** thequestions.**5X10=50M**

9. a) Explain the difference between File System and Data baseApproach. (OR)
   b) Explain the three-level architecture of DBMS.
10. a) What is Data Model? What are the various data models available for data base systems? (OR)
    b) What is EER Model? Explain Constraints on specialization andgeneration.
11. a) What is key? Explain different types of keys used in a relational data base. (OR)
    b) Explain various types of Relational Calculus.
12. a) Explain different types of Operators in SQL.
    (OR)
    b) What are Nested Queries? How to create them? Discuss it with relevant example.
13. a) What are the types of Cursors? Discuss theirattributes.
    (OR)
    b).What is a Package? What does it contain? Discuss.

SIR C R REDDY COLLEGE FOR WOMEN

B.AComputerApplications /B.Sc.
ComputerScience/B.Sc.IT
Syllabus UnderCBCSw.e.f.2018-2019

IIIYEARVSEMESTER

PaperVI: Software Engineering

BSc	Semester: VI	Credits: 4
Course: 06	Software Engineering	Hrs./Wk: 4

Course Objective:

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

- Be employed in industry, government, or entrepreneurial endeavors to demonstrate professional advancement through significant technical achievements andexpanded leadershipresponsibility.
- Demonstrate the ability to work effectively as a team member and/or leader in an ever- changing professionalenvironment.
- Progress through advanced degree or certificate programs in computing,science, engineering, business, andother professionally relatedfields.

Course Outcomes:

1. Ability to gather and specify requirements of the software projects.
2. Ability to analyzes software requirements with existing tools
3. Able to differentiate different testing methodologies
4. Able to understand and apply the basic project management practices in real life projects
5. Ability to work in a team as well as independently on software projects

UNITI12Hrs

INTRODUCTION: Software Engineering Process paradigms-Project Management Process and Project Metrics – software estimation - Empirical estimation models - Planning – Risk Analysis-Software project scheduling.

UNITII12Hrs

REQUIREMENTS ANALYSIS: Requirement Engineering Processes – Feasibility Study – Problem of Requirements–Software Requirement Analysis–Analysis Concepts and Principles– Analysis Process– Analysis Model

UNITIII12Hrs

SOFTWARE DESIGN: Software design-Abstraction-Modularity-Software Architecture - Effective modular design - Cohesion and Coupling - Architectural design and Procedural design-Dataflow oriented design.

UNITIV12Hrs

USER INTERFACE DESIGN AND REAL TIME SYSTEMS: User interface design – Human factors-Human computer interaction-Human-Computer Interface design-Interface design- Interface standards.

UNITV12Hrs

SOFTWARE QUALITY ANDTESTING: Software Quality Assurance - Quality metrics - Software Reliability - Software testing - Path testing – Control Structures testing - Black Box testing-Integration, Validation and system testing-Reverse Engineering and Re-engineering. CASE tools –projects management, tools - analysis anddesign tools – programming tools – integration and testing tool-Case studies.

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

REFERENCEBOOKS:

1. RogerPressmanS., "Software Engineering: A Practitioner's Approach", 7th Edition, Mc Graw Hill, 2010.
2. Software Engineering Principles and Practice by Deepak Jain Oxford University Press
2. Sommerville, "Software Engineering", Eighth Edition, Pearson Education, 2007
3. Pfleeger, "Software Engineering: Theory & Practice", 3rdEdition, Pearson Education, 2009
4. Carlo Ghazi, Mehdi Jazayerli, Dino Mandril, "Fundamentals of Software Engineering", Pearson Education, 2003

Student Activity:

1. Visit any financial organization nearby andprepare requirement analysisreport.
2. Visit any industrial organization and prepareriskchart.

Suggested Activities:

Seminar/Quiz/Assignment/Group Discussion/Power Point Presentation.

Web Link:

https: //youtu.be/Z6f9ckEElsU

SIR C R REDDY COLLEGE FOR WOMEN

IIIYEAR VSEMESTER

Software Engineering Lab

BSc	Semester: VI	Credits: 1
Course: 06	Software Engineering LAB	Hrs./Wk: 2

1. Studying various phases of Water-Fall Model.
2. Prepare SRS for Banking or line book stored main problem
3. Using COCOMO model estimate effort for Banking or on line book store domain problem.
4. Calculate effort using FP oriented estimation model
5. Analyze the Risk related to the project and prepare RMMM plan.
6. Develop Time-line chart and project table using PERT or CPM project scheduling methods.
7. Draw E-R diagram, DFD, CFD and STD for the project.
8. Design of the test cases.
9. Prepare FTR. Version control and change control for software configuration item

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper
V SEMESTER PART –II COMPUTER SCIENCE
(w.e.f. 2018-2019)
B.Sc. ComputerScience
Software Engineering

Time: 3Hours MaxMarks: 75

SECTION – A

Answer any **FIVE** questions.**5X5=25M**

1. Describe software projectscheduling.
2. Explain the analysisprocess.
3. Write about cohesion andcoupling.
4. Write about user interfacedesign.
5. Describe integration andtestingtool.
6. Differentiate between waterfall andspiralmodel.
7. Write about qualitymetrics.
8. Describe software design.

SECTION – B

Answer **ALL**thequestions. **5X10=50M**

9. a) Explain Software Engineering process paradigm with neatdiagrams.
   OR
   b) Explain process andproject metrics.
10. a) Explain Requirement Engineering process.
    OR
    b) Explain about analysis model.
11. a) Explain softwarearchitecture.
    OR
    b) Explain Architecture design andproceduraldesign.
12. a) Explain about interfacedesign.
    OR
    b) Describe human computer interaction.
13. a) Explain Black-Box testing and pathtesting.
    OR
    b) Write about control structuretesting.

Computer Applications /B. Sc.ComputerScience/B.Sc.IT SyllabusUnderCBCS
W.e.f.2018-2019

PROJECT&VIVA-VOCE

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

Theprojectis of 2hours/weekfor V&VIsemesterduration andastudentisexpectedto do planning, analyzing, designing,coding, andimplementing the project. The initiation of project should be with the project proposal. The synopsis approval will be given by the project guides.

Theproject proposalshould includethefollowing:

- Title
- Objectives
- Input andoutput
- Details of modules andprocesslogic
- Limitationsoftheproject
- Tools/platforms, Languages to beused
- Scope of futureapplication

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-voice examinations.

SIR C R REDDY COLLEGE FOR WOMEN

B.Sc.ComputerScience/InformationTechnology (IT)SyllabusUnder CBCS

W.e.f.2018-2019(ModifiedinApril2019)

Structure of ComputerScience/InformationTechnology (IT)Syllabus

Semester	Paper	Subject	Hrs.	Credits	IA	ES	Total
FIRSTYEAR							
SEMESTERVI	VII (A/B/C)*	**Elective-I**					
		A. OperatingSystems	3	3	25	75	100
		OperatingSystemsLab	3	2	0	50	50
		B. ComputerNetworks	3	3	25	75	100
		ComputerNetworksLab	3	2	0	50	50
		C. WebTechnologies	3	3	25	75	100
		WebTechnologiesLab	3	2	0	50	50
	VIII ** Cluster – A- A1, A2 or Cluster-B- B1, B2 Or Cluster –C– C1, C2	**Elective-II (ClusterA)**					
		A1.Foundations of DataScience	3	3	25	75	100
		Foundations of DataScienceLab (throughR)	3	2	0	50	50
		A2.BigDataTechnology	3	3	25	75	100
		Big Data TechnologyLab (Hadoop)	3	2	0	50	50
		Elective-II (ClusterB)					
		B1.DistributedSystems	3	3	25	75	100
		DistributedSystemsLab	3	2	0	50	50
		B2.Cloud computing	3	3	25	75	100
		CloudComputingLab	3	2	0	50	50
		Elective-II (ClusterC)					
		C1.PHP– MySQL&WordPress	3	3	25	75	100
		PHP-MySQL&WordPressLab	3	2	0	50	50
		C2.AdvancedJavaScript: jQuery, Ajax, AngularJS&JSON	3	3	25	75	100
		AdvancedJavaScript Lab	3	2	0	50	50
		Project–2	5	5	25	75	100

***Candidate has to choose only one paper**

****Candidates a readvised to choose Cluster(A) if they have chosen VII(A) and Choose Cluster (B)if they have chosen VII(B)etc.**

However, a candidate may choose any cluster irrespective of what they have chosen in paperVII

SIR C R REDDY COLLEGE FOR WOMEN

B.Sc.ComputerScience/InformationTechnology (IT)

SyllabusUnderCBCS

W.e.f.2018-2019(ModifiedinApril2019)

Structure of Computer Science/
Information Technology (IT) Syllabus

III YEAR VI SEMESTER

Paper-VII: Elective-C

Web Technologies

BSc	Semester: VI	Credits: 3
Course: 06	WebTechnologies	Hrs/Wk: 3

Course Objective:

- To provideknowledgeonwebarchitecture, webservices, clientside andserver-sidescriptingtechnologies to focus on the development of web-based information systems and webservices.
- To provideskillsto designinteractive anddynamicwebsites.

Course Outcomes:

1. To understandthewebarchitecture andwebservices.
2. To practicelatestwebtechnologies andtoolsby conductingexperiments.
3. To designinteractivewebpagesusingHTML andStylesheets.
4. To study theframework andbuildingblocks of .NETIntegrated DevelopmentEnvironment.
5. To providesolutionsby identifying andformulatingITrelatedproblems.

UNIT–I12Hrs

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

UNIT–II12Hrs

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

UNIT–III12Hrs

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–IV12Hrs

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

UNIT– V12Hrs

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

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

References:

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

StudentActivities:

1. **Prepare a website for your college**
2. **Prepare your personal website**

Suggested Activities:

Seminar/Quiz/Assignment/Group Discussion/Power Point Presentation.

Web Link:

https: //youtu.be/QEtWL4lWlL4

SIR C R REDDY COLLEGE FOR WOMEN

Paper-VII: Elective-C

Web Technologies Lab

BSc	Semester: VI	Credits: 3
Course: 06	WebTechnologies LAB	Hrs/Wk: 2

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.

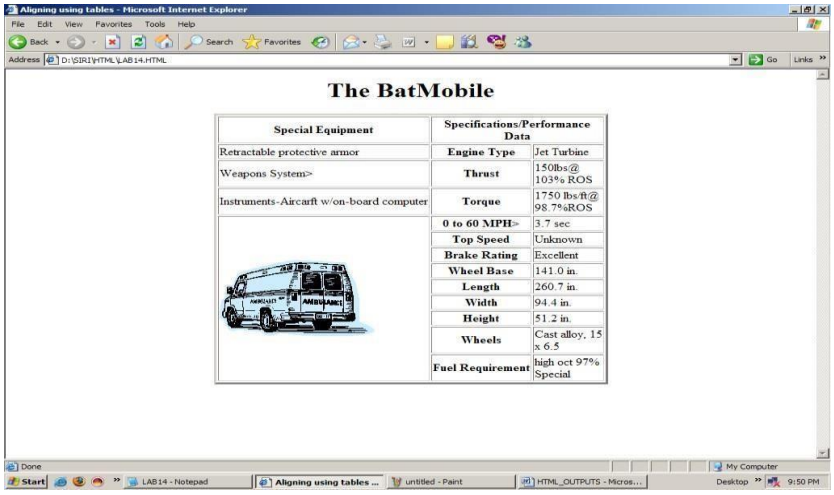
5. Create calendar object in your webpage.

6. Create an applet that accepts two numbers and perform all the arithmetic operations on them.

7. Create nested table to store your curriculum.

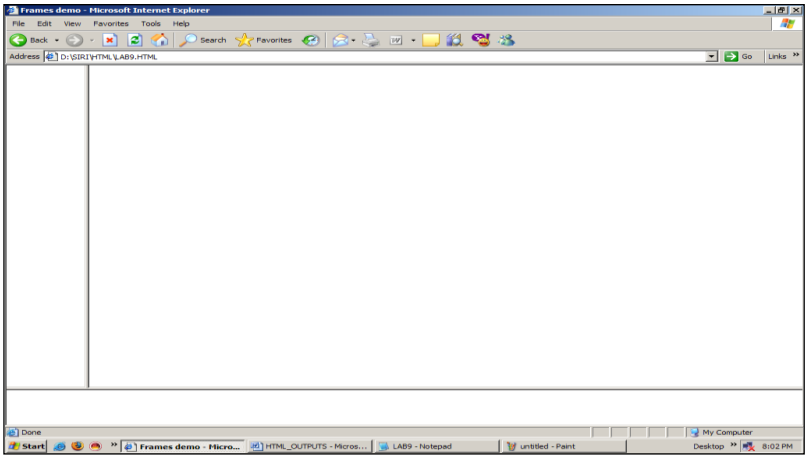
8. Create a form that accepts the information from the subscriber of a mailing system.

9. Design the page as follows:

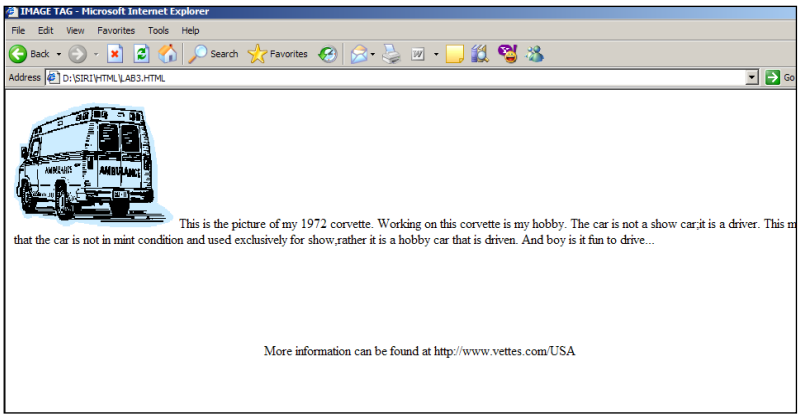


11. Using "table"tag, align the images as follows:

12. Divide the web page as follows:

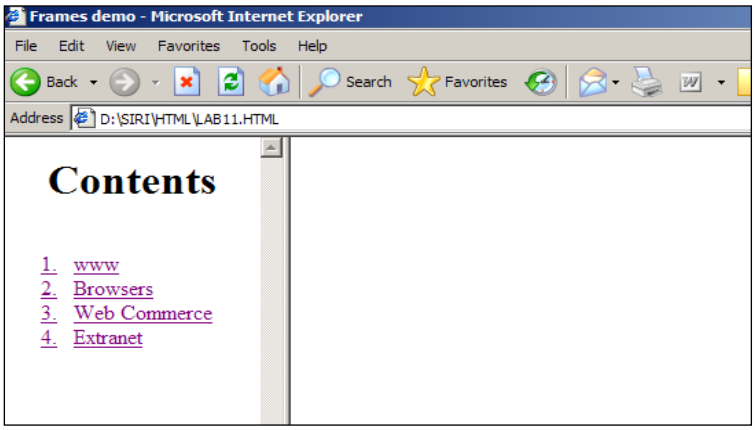


13. Design the page as follows:



14. Illustrate the horizontal rulers in your page.

15. Create a help file as follows:



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

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

18. Write a html program including stylesheets.

20. Write a html program to layers of information in webpage.

21. Create a static webpage.

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper
VI SEMESTER PART –II COMPUTER SCIENCE
(w.e.f. 2018-2019)
B.Sc. Computer Science
WebTechnologies

Time: 3Hours MaxMarks: 75

SECTION – A

Answer any **FIVE** questions.**5X5=25M**

1. Explain the features of a HTMLpage.
2. Briefly explain various types of CSS.
3. Explain different mathematical functions inJavaScript.
4. How JavaScript is useful to validate your data in a webpage?Explain.
5. Briefly write about presentingXML.
6. Explain the formatting tags inHTML.
7. What is regular expression?Explain.
8. Write about Tex-Only MenuSystem.

SECTION – B

Answer **ALL** the questions.**5X10=50M**

9. a) What is table? Explain how to create and their attributes inHTML.

(OR)

b) Why forms are useful in HTML? How create them in HTML? Explain.

10a). Explain how the format blocks of information.

(OR)

b) Explain about layers in CSS in detail an example program.

11 a) what is JavaScript? Write benefits problems of JavaScript.

(OR)

b) Explain different Built in object JavaScript.

12. a)Howto writeadatato different frame?Explain withanexample.

(OR)

b) Explain floating logos inJavaScript.

13. a) Why XML? Explain XMLelements.

(OR)

b) With an example explain XMLSchema.

SIR C R REDDY COLLEGE FOR WOMEN

B.Sc. Computer Science/Information Technology (IT)

Syllabus Under CBCS

W.e.f.2018-2019(Modified in April 2019)

III YEAR VI SEMESTER

(Cluster2)Paper-VIII: Elective–B-1

Distributed Systems

BSc	Semester: VI	Credits: 3
Course: 06	**DistributedSystems**	**Hrs/Wk: 3**

Course Objectives:

To expose the fundamentals of distributed computer systems, assuming the availability of facilities for data transmission.

- To discuss multiple levels of distributed algorithms, distributed file systems, distributed data bases, security and protection.
- Design and develop database for large volumes and varieties of data with optimized data processing techniques.
- To provide hardware and software issues in modern distributed systems.
- Understand Distributed system readers to basic concepts of middleware, states of middleware technology

Course Outcomes:

- Create models for distributed systems.
- Apply different techniques learned in the distributed system.
- Understand the design principles for distributed systemand the architectures for distributed systems.
- Apply various distributed algorithms related to concurrency control, deadlocks, load balancing and election algorithm, etc.
- Analyze fault tolerance and recovery in distributedsystems.
- Implement different distributed algorithms over distributed current platforms.

UNITI12Hrs

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

UNITII12Hrs

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.

UNITIII12Hrs

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

UNITIV12Hrs

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

UNITV12Hrs

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

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

ReferenceBooks

1. Pradeep. K. Sinha: "Distributed Operating Systems: Conceptsand Design", PHI, 2007.2. GeorgeCoulouris, Jean Dollimore, Tim Kindberg: "Distributed Systems", Concept and Design, 3rd.Edition, Pearson Education, 2005.

StudentActivity:

1. Implementation of Distributed Mutual Exclusion Algorithm.
2. Create a Distributed Simulation Environment.

Suggested Activities:

Seminar/Quiz/Assignment/Group Discussion/Power Point Presentation.

Web Link:

https: //youtu.be/dX2PSA0si5g

SIR C R REDDY COLLEGE FOR WOMEN

IIIYEARVISEMESTER

(Cluster2)Paper-VIII: Elective–B-1 DistributedSystemsLab

Objective:

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

Outcomes:

1. Studentswillgettheconcepts of Inter-processcommunication
2. Students will get the concepts of Distributed Mutual Exclusion and Distributed Deadlock Detection algorithm.

BSc	Semester: VI	Credits: 3
Course: 06	**DistributedSystems**	**Hrs./Wk.: 2**

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.

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper
VI SEMESTER PART –II COMPUTER SCIENCE
(w.e.f. 2018-2019)
B.Sc. Computer Science

Distributed Systems

Time: 3Hours MaxMarks: 75

SECTION – A

Answer any **FIVE** questions.**5X5=25M**

1. Define Distributed system. What are the goals of Distributed System.
2. Write about RPC and its features.
3. Briefly explain design implementation issues of DSM.
4. How computer clocks are implemented?
5. What are the similarities and Dissimilarities between process and thread?
6. Explain distributed system with neat diagram.
7. Explain about stub generation.
8. What are the differences between message passing and distributed shared memory.

SECTION – B

Answer **ALL** the questions.**5X10=50M**

9.a) Explain about Tightly and Loosely couple systems.

OR

b) Explain Design Issues in Distributed Operating System.

10.a) Briefly explain about implementation of RPC mechanism.

OR

b) Explain the Call Semantics.

11.a) What is Granularity? Explain Criteria for choosing granularity parameter.

OR

b) Write the advantages of DSM system.

12.a) Explain various Deadlock Detection.

OR

b) Explain Ring Election Algorithm.

13.a) Write about issues in Designing load-balancing algorithms.

OR

b) What is thread? Explain threadstructure.

SIR C R REDDY COLLEGE FOR WOMEN

B.Sc.ComputerScience/InformationTechnology (IT) SyllabusUnder CBCS

W.e.f.2018-2019(ModifiedinApril2019)

Structure of Computer Science/Information Technology (IT) Syllabus

III YEAR VI SEMESTER
(Cluster2) Paper-VIII: Elective–B- 2
Cloud Computing

BSc	Semester: VI	Credits: 3
Course: 06	**Cloud Computing**	**Hrs/Wk: 3**

Course Objectives:

The student will learn about the cloud environment,

Building software systems and components that scale to millions of users in modern internet, cloud concepts capabilitiesacross the various cloud service models including Iaas, Paas, Saas, and developing cloud-based software applications on top of cloud platforms.

- The student will learn about the cloud environment, building software systemsandcomponents that scale to millions of users in moderninternet.
- Cloud concepts capabilities across the various cloud service models including Iaas, Paas, Saas, and developing cloud based software applications on top of cloud platforms

Course Outcomes:

1. Compare the strengths and limitations of cloud computing
2. Identify the architecture, infrastructure and delivery models of cloud computing
3. Apply suitable virtualization concept.
4. Choose the appropriate cloud player, Programming Models and approach.
5. Address the core issues of cloud computing such as security, privacy and inter operability
6. Design Cloud Services and Set a private cloud

Unit1 **12Hrs**

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

UnitII12Hrs

Cloud scenarios – 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

UnitIII **12Hrs**

Cloud architecture: Cloud delivery model–SPI framework, SPI evolution
Software as a Service (SaaS): SaaS service providers – Google App Engine, Sales for ce.com and google platform–Benefits–Operational benefits-Economic benefits – Evaluating SaaS **Platform as a Service** (PaaS): PaaS service providers–Sales force.com – Services and Benefits

UnitIV **12Hrs**

Infrastructure as a Service (IaaS): IaaS service providers–Amazon EC2, Gogrid — – Benefits
Cloud deployment model: Public clouds – Private clouds – Community clouds –Hybrid clouds- Advantages of Cloud computing

UnitV12Hrs

Virtualization: Virtualization and cloud computing-Need of virtualization– cost, administration, fast deployment, reduce infrastructure cost-limitations
Types of hardware virtualization: Full virtualization-partial virtualization-paravirtualization **Desktop virtualization**: Software virtualization–Memory Virtualization-Storage
virtualization –Datavirtualization–Network virtualization **Microsoft Implementation**: Microsoft Hyper V–VMware features and infrastructure–Virtual Box -Thin client

Noted:

Employability – Sky Blue
Skill – Pink
Entrepreneur - Green

Reference Books

1. Cloud computing a practical approach-Anthony T. Velte, To by Velte Robert Elsenpeter TATA Mc Graw- Hill, NewDelhi-2010
2. Cloud computing: Web Based Applications That Change the WayYouWork and Collaborate Online- Michael Miller- Que2008
3. Cloud computing, Theory and Practice, DanC Marinescu, MK Elsevier.
4. Cloud computing, AH ands- on approach, Arshdeep Bhaga, VijayMadisetti, University Press
5. Mastering Cloud computing, Foundations and Application Programming, Raj Kumar Buyya, Christenvecctiola, S Tammaraiselvi, TMH.

Student Activity:

1. Prepare the list of companies providing cloud services category wise.
2. Create a private cloud using local server

Suggested Activities:

Seminar/Quiz/Assignment/Group Discussion/Power Point Presentation.

Web Link:

https: //youtu.be/NzZXz3fJf6o

SIR C R REDDY COLLEGE FOR WOMEN

IIIYEARVISEMESTER
(Cluster2) Paper-VIII: Elective–B-

2Cloud computing Lab

BSc	Semester: VI	Credits: 3
Course: 06	**Cloud computing LAB**	**Hrs./Wk.: 2**

Outcomes: Learner will be Able to …

1. Appreciate cloud architecture
2. Create and run virtual machines on open source OS
3. Implement Infrastructure, storage as a Service.

Use Eucalyptus Or Open Nebula or equivalent to setup the cloud and demonstrate.

1. Find procedure to run the virtual machine of different configuration. Check how many virtual machines can be utilized at particular time.
2. Find procedure to attach virtual block to the virtual machine and check whether it holds the data even after the release of the virtual machine.
3. Install a C compiler in the virtual machine and execute a sample program.
4. Show the virtual machine migration based on the certain condition from one node to the other.
5. Find procedure to install storage controller and interact with it.

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 VMware's workstation/Oracle's Virtual Box and Guest O.S.
6. Casestudy : PAAS (Facebook, GoogleAppEngine)
7. CaseStudy : Amazon web services.

SIR C R REDDY COLLEGE FOR WOMEN

Model Question Paper
VI SEMESTER PART –II COMPUTER SCIENCE
(w.e.f. 2018-2019)
B.Sc. Computer Science

Cloud Computing

Time: 3Hours MaxMarks: 75

SECTION – A

Answer any **FIVE** questions.**5X5=25M**

1. What is cloudcomputing?
2. Explain about cloudscenarios.
3. Write aboutEconomic
4. Explain the benefits of public cloudmodel.
5. Write about MicrosoftHyper-V
6. List out and briefly explain the components ofcloud.
7. Briefly explain the security benefits of cloudcomputing.
8. What is thin client? Define itsuses.

SECTION – B

Answer **ALL** the questions.**5X10=50M**

9.a) Briefly explain about Cloud service models.

OR

b) Write about essential characters for cloud computing.

10.a) Explain Developing of your Applications and cloud computing.

OR

b) Explain the security concern in cloud computing.

11.a) What is SPI Framework for cloud computing?Explain.

OR

b) Write the short notes on salesforce.com.

12.a) Explain about cloud Computing IaaS service providers.

OR

b) Explain about private cloud computing and its advantages.

13.a) Briefly explain about types of Hardware virtualization.

OR

b) Explain about VM Ware infrastructure with a neat diagram.