



NAAC: B+(CGPA 2.60)

Estd: 1937

SRR & CVR GOVT. DEGREE COLLEGE (Autonomous)

VIJAYAWADA – 520 004 :: KRISHNA DISTRICT:: ANDHRA PRADESH

Phone No: 0866-2430060

Website: www.srrcvr.org

Fax No: 0866-2441092

Email: srrandcvr@gmail.com

Date: 25 -02-2021

Department of Computer Science

Up gradation Of Syllabus for 1st,2nd,3rd,5th Semesters. Minutes of the meeting of Board of Studies in Computer Science held on 25/02/2021 at 1.00 pm in Computer Science Department.

Members Present

DEPARTMENT OF COMPUTER SCIENCE

- | | |
|-----------------------------|---|
| 1. Sri T.V.Rambabu | Chairman, Dept of Computer Science |
| 2. Dr. R. Kiran Kumar | University Nominee, Krishna University |
| 3. Dr. K.B.S Sastry | Subject Expert, Andhra Loyola College, Vijayawada Krishna Dist |
| 4. Sri K.Sridhar | Subject Expert, P.B.Siddartha College of Arts&Science ,Vijayawada |
| 5. SmtP.Sailaja | Member |
| 6. Sri T.Jaya Krishna | Member |
| 7. Sri. KVLN Prasad | Member |
| 8. D.Phani | Member |
| 9. M.Suresh Babu | Member |
| 10. Sri. G.Sridhar | Member |
| 11. Sri MVS Sarma | Member |
| 12. Ms T.Pavani | Member |
| 13. Sri. M. Srihari Krishna | Industry Member |
| 14. Sri. B. Nani | Alumni Member |

Resolutions

1. It was unanimously resolved to Upgrade and Adopt Syllabus for 5TH SEMESTER III B.Sc.(Computer Science) groups(MECS, MSCS, MPCS,MCCS) , 3rd SEMESTER IIB.Sc(Computer Science) groups(MECS, MSCS, MPCS,MCCS) AND 1ST ,2ND SEMESTERS OF IB.Sc(Computer Science)groups(MECS, MSCS, MPCS,MCCS) and IB.Sc(Data Science) w.e.f. 2020 – 2021 academic year. The Upgraded Syllabus for 1st,2nd,3rd, 5th Semesters are furnished in Appendix – I.
2. It was unanimously resolved to Upgrade and Adopt Syllabus for 5TH SEMESTER III B.Com(Computer Applications) ,III BBA , 3rd SEMESTER II B.Com(ComputerApplications) and 1ST ,2ND SEMESTERS OF IB.Com(Computer Applications) and IB.B.A courses w.e.f 2020-2021 and the Upgraded Syllabus for 1st,2nd,3rd, 5th Semesters are furnished in Appendix - II.

3. It was unanimously resolved to Upgrade and Adopt Syllabus for Life Skill Course titled Basic Computer Applications For 1ST SEMESTER FOR ALL GROUPS OF BA/B.COM/B.Sc/BBA and Information and Communication Technology for 2nd SEMESTER FOR ALL GROUPS OF BA/B.COM/B.Sc/BBA w.e.f from revised cbcs 2020-21. Information and communication Technology (ICT-2)course for 3rd SEMESTER FOR ALL GROUPS OF BA/B.COM/B.Sc/BBA w.e.f from revised cbcs 2020-21.
4. It was unanimously resolved to follow and Adopt Krishna University pattern and guidelines time to time for conducting practical classes and examinations for B.Com(Computer Applications) and BBA. Courses for all semesters.
5. It was unanimously resolved to conduct examinations **Internal 40 marks** and **External 60 marks** in both B.Sc (Computer Science) ,B.Sc(Data Science) and B.Com (Computer applications) and BBA subject to as per instructions given by academic council of SRR & CVR Govt. Degree(A) College Vijayawada
6. 60 marks in **External assessment** is divided as
 - a. **20 marks** in **Section A** and
 - b. **40 marks** in **Section B**40 marks in **Internal Assessment** is divided as
 - c. 10 marks for Assignment,
 - d. 5 marks for Viva/Assessment,
 - e. 5 marks for Seminars,
 - f. 10 marks for Project work and
 - g. 10 marks for the Best of the two mid exams
7. The HOD has to prepare the list of Examiners and Paper Setters and will be submitted to the Academic Council
8. The committee has approved the syllabus with **5 Units for each Semester** .
9. The committee has approved the Model Question Paper for external exams - 60 marks and **time duration of examination is 3 hours** and external exam 60 marks are divided as follows,
 - a. In Section A, answer **any 5** out of 10 Questions. Each one carries **4 marks**, totaling to **20 marks**. 2 questions have to be selected From each of the five units
 - b. In Section B, answer **all 5** questions. Each question has internal choice. Each question carries **8 marks** totaling to **40 marks**. Each question has to be selected from each unit/Module.
10. The committee has approved the Blue Print of the question paper. Question paper has to be designed in such a way that **12 marks have to be obtained from each unit/Module**.

11. Modifications, if need be in the above resolutions, will be done by the HOD and the faculty members of the department.
12. It was unanimously resolved to conduct examinations **OffLine/OnLine/Blended mode for this academic year because of prevailing COVID-19 situation**. The discretion powers of selecting **MODE** of examinations are with the Principal and COE of this Institution. The Department will follow the instructions and pattern of examination given by the Principal and COE time to time .
13. Further the committee resolved to give empowerment for any small changes to the Chairman of BOS
14. For practical examinations maximum marks allotted is 50 mark per each paper. Exam duration 3 hrs. 2 credits, work load 3hrs per batch per week each batch consists of max. 15 students spill over batch is minimum of 8 students.
- 15 .20 Percent of Syllabus is changed for IB.Sc(Computer Science) paper for 1st Semester and 2nd Semesters. As detailed below .

In 1st Semester in Problem Solving in C paper from UNIT-V of APSCHE approved Syllabus 2020-21 the following topics are removed

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.

The following topics are added

Introduction to C++ language ,difference between c and c++ ,Basic oops concepts, Datatypes and operators in C++

In 2nd Semester in Data Structures Using C paper from UNIT-IV and UNIT-V of APSCHE approved Syllabus 2020-21

The following topics are removed

From UNIT-II : Atomic Linked List, Linked List in Arrays

From UNIT-IV: Counting Number of Binary Trees, Applications of Binary Tree

From UNIT-V :Indexed Sequential Search , Shortest Path, Application of Graphs.

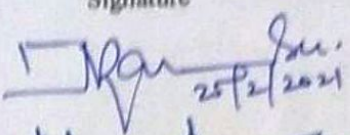
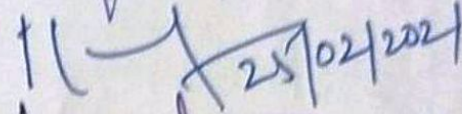
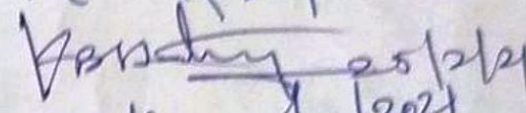
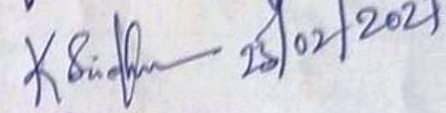
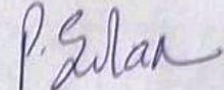
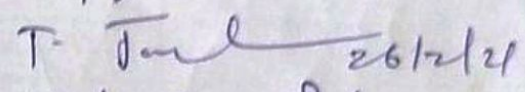
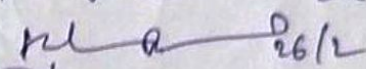
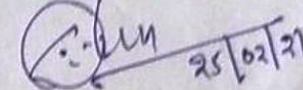
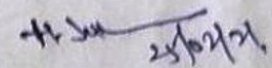
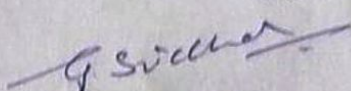
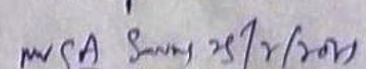
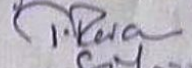
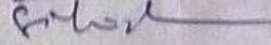
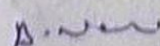
The following topics are Added

In UNIT-IV: Heap tree, creation ,operations on Heap Tree

In UNIT-V : Quick sort, Selection sort algorithms

16. The committee has approved that all the above resolutions will be effective for three years i.e., 2020-21, 2021-22, 2022-23, academic years

Signatures of the members of the BOS :

Name	Position	Signature
1. Sri T.V Rambabu	Chairman	 25/2/2021
2. Dr. R. Kiran Kumar	University Nominee	 25/02/2021
3. Dr. K.B.S Sastry	Subject Expert	 25/2/21
4. Sri K. Sridhar	Subject Expert	 25/02/2021
5. Smt P. Sailaja	Member	
6. Sri T. Jaya Krishna	Member	 26/2/21
7. Sri. KVLN Prasad	Member	 26/2
8. Sri D. Phani	Member	 25/02/21
9. Sri M. Suresh Babu	Member	 25/2/21
10. Sri. G. Sridhar	Member	
11. Sri MVS Sarma	Member	 25/2/2021
12. Ms T. Pavani	Member	
13. Sri. M. Srihari Krishna	Industry Member	
14. Sri. B. Nani	Alumni Member	

Principal

SRR&CVR GOVT DEGREE(A) COLLEGE VIJAYAWADA
III B.SC(COMPUTER SCIENCE) III YEAR V SEMESTER2020-21
PAPER-V Data Base Management System SYLLABUS

Course Objective:

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

Course Outcomes :

On completing the subject, students will be able to: 1. Design and model of data in database. 2. Store, Retrieve data in database.

Program Outcomes :

1. Student knows database structure and its design
2. Students are able to understand Different data models used for database design
3. Students are able to understand database transactions and data recovery
4. Students can use DML, DDL, DCL commands to manipulate data in the database

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, Evaluation of Database management System, Classification of Database Management System, DBMS Approach, advantages of DBMS, Anis/spark Data Model, data models, Components and Interfaces of Database Management System. Database Architecture, Situations where DBMS is not Necessary, DBMS Vendors and Their Products.

Article for reference Chapters 1,2 from the reference book "Database System Concepts" by Abraham Silberschatz, Henry Korth

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 types, advantages of ER modeling.

Article for reference Chapters 4,5 from the reference book "Database System Concepts" by Abraham Silberschatz, Henry Korth

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

Article for reference Chapters 6 from the reference book "Database System Concepts" by Abraham Silberschatz, Henry Korth

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,

Article for reference Chapters 8,9 from the reference book "Database System Concepts" by Abraham Silberschatz, Henry Korth

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.

Article for reference Chapters 15,16 from the reference book "Database System Concepts" by Abraham Silberschatz, Henry Korth

Reference Books

1. "Database System Concepts" by Abraham Silberschatz, Henry Korth, and S. Sudarshan, McGrawhill, 2010, 9780073523323
2. "Database Management Systems" by Raghu Ramakrishnan, McGrawhill, 2002,
3. Fundamentals of Relational Database Management Systems by S. Sumathi, S. Esakkirajan, Springer Publications
4. "An Introduction to Database Systems" by Bipin C Desai
5. "Principles of Database Systems" by J. D. Ullman
6. "Fundamentals of Database Systems" by R. Elmasri and S. Navathe

SRR&CVR GOVT DEGREE(A) COLLEGE VIJAYAWADA
IIB.SC(COMPUTER SCIENCE) III YEAR V SEMESTER 2020-21
PAPER VI : Software Engineering SYLLABUS

Course Objectives:

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

Course outcomes:

1. Ability to gather and specify requirements of the software projects.
2. Ability to analyze 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

Program outcomes:

1. How water fall model can be implemented
2. how case tools can be implemented
3. How White Box testing can be implemented
4. How Black Box testing can be implemented

UNIT I

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

Article reference chapters 1,2 from Roger Pressman S., "Software Engineering: A Practitioner's Approach", 7th Edition, McGraw Hill, 2010.

UNIT II

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

Article reference chapters 3,4 from Roger Pressman S., "Software Engineering: A Practitioner's Approach", 7th Edition, McGraw Hill, 2010.

UNIT III

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

Article reference chapters 8,9 from Roger Pressman S., "Software Engineering: A Practitioner's Approach", 7th Edition, McGraw Hill, 2010.

UNIT IV

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

Article reference chapters 11,12 from Roger Pressman S., "Software Engineering: A Practitioner's Approach", 7th Edition, McGraw Hill, 2010.

UNIT V

SOFTWARE QUALITY AND TESTING :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 and design tools, – programming tools - integration and testing tool - Case studies.

Article reference chapters 20,21 from Roger Pressman S., "Software Engineering: A Practitioner's Approach", 7th Edition, McGraw Hill, 2010.

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
2. Sommerville, "Software Engineering", Eighth Edition, Pearson Education, 2007
3. Pfleeger, "Software Engineering: Theory & Practice", 3rd Edition, Pearson Education, 2009
4. Carlo Ghazi, Mehdi Jazayari, Dino Mandrioli, "Fundamentals of Software Engineering", Pearson Education, 2003

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SRR&CVR GOVT(A) DEGREE COLLEGE
B.Sc(COMPUTER SCIENCE)
II YEAR III SEMESTER 2020-21
Paper-III : OBJECT ORIENTED PROGRAMMING USING JAVA
SYLLABUS

Course Objectives:

As the business environment becomes more sophisticated, the software development (software engineering is about managing complexity) is becoming increasingly complex. As of the best programming paradigm which helps to eliminate complexity of large projects, Object Oriented Programming (OOP) has become the predominant technique for writing software in the past decade. Many other important software development techniques are based upon the fundamental ideas captured by object-oriented programming.

Course Outcomes:

At the end of this course student will:

1. Understand the concept and underlying principles of Object-Oriented Programming
2. Understand how object-oriented concepts are incorporated into the Java programming language
3. Develop problem-solving and programming skills using OOP concept
4. Understand the benefits of a well structured program
5. Develop the ability to solve real-world problems through software development in high-level programming language like Java
6. Develop efficient Java applets and applications using OOP concept
7. Become familiar with the fundamentals and acquire programming skills in the Java language.

Program Outcomes:

1. How Inheritance is implemented
2. How Multithreading can be implemented
3. How Interfaces works to data abstraction

UNIT-1

FUNDAMENTALS OF OBJECT – ORIENTED PROGRAMMING :Introduction, Object Oriented paradigm, Basic Concepts of OOP, Benefits of OOP, Applications of OOP, Java features: **OVERVIEW OF JAVA LANGUAGE**: Introduction, Simple Java program structure, Java tokens, Java Statements, Implementing a Java Program, Java Virtual Machine, Command line arguments. **CONSTANTS, VARIABLES & DATA TYPES**: Introduction, Constants, Variables, Data Types, Declaration of Variables, Giving Value to Variables, Scope of variables, Symbolic Constants, Type casting, Getting Value of Variables, Standard Default values; **OPERATORS & EXPRESSIONS**.

1. Article reference chapter 1,2 from book by E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill Company.

UNIT-II

DECISION MAKING & BRANCHING: Introduction, Decision making with if statement, Simple if statement, if. Else statement, Nesting of if. else statements, the else if ladder, the switch statement, the conditional operator. **LOOPING**: Introduction, The While statement, the do-while statement, the for statement, Jumps in loops.

1. Article reference chapter 3,4 from book by E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill

CLASSES, OBJECTS & METHODS: Introduction, Defining a class, Adding variables, Adding methods, Creating objects, Accessing class members, Constructors, Method overloading, Static members, Nesting of methods;

UNIT-III

INHERITANCE: Extending a class, Overloading methods, Final variables and methods, Final classes, Abstract methods and classes;

ARRAYS, STRINGS AND VECTORS: Arrays, One-dimensional arrays, Creating an array, Two – dimensional arrays, Strings, Vectors, Wrapper classes;

INTERFACES: MULTIPLE INHERITANCE: Introduction, Defining interfaces, Extending interfaces, Implementing interfaces, Assessing interface variables;

1. **Article reference chapter 4,5 from book by E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill**

UNIT-IV

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,

1. **Article reference chapter 6 from book by E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill**

UNIT-V

APPLET PROGRAMMING: local and remote applets, Applets and Applications, Building Applet code, Applet Life cycle: Initialization state, Running state, Idle or stopped state, Dead state, Display state.

PACKAGES: Introduction, Java API Packages, Using System Packages, Naming conventions, Creating Packages, Accessing a Package, using a Package.

MANAGING INPUT/OUTPUT FILES IN JAVA: Introduction, Concept of Streams, Stream classes, Byte Stream Classes, Input Stream Classes, Output Stream Classes, Character Stream classes: Reader stream classes, Writer Stream classes, Using Streams, Reading and writing files.

1. **Article reference chapter 7,8 from book by E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill**

Reference Books:

2. E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill Company.
3. John R. Hubbard, Programming with Java, Second Edition, Schaum's outline Series, TATA McGraw-Hill Company.
4. Deitel & Deitel. Java TM: How to Program, PHI (2007)
5. Java Programming: From Problem Analysis to Program Design- D.S Mallik
6. Object Oriented Programming Through Java by P. Radha Krishna, Universities Press (2008)

Student Activity:

1. Create a front end using JAVA for the student database created
2. Learn the difference between ODBC and JDBC

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P. Radha

SRR&CVR GOVT DEGREE(A) COLLEGE VIJAYAWADA
I B.Sc(COMPUTER SCIENCE/DATA SCIENCE) CBCS SYLLABUS

W.E.F - 2020-21

I YEAR SEMESTER-1 PAPER -1

TITLE OF THE PAPER : PROBLEM SOLVING IN C

Course Objectives:

This course aims to provide exposure to problem-solving through programming. It introduces the concepts of the C Programming language.

Course Outcomes:

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

1. Understand the evolution and functionality of a Digital Computer.
2. Apply logical skills to analyse a given problem
3. Develop an algorithm for solving a given problem.
4. Understand 'C' language constructs like Iterative statements, Array processing, Pointers, etc.
5. Apply 'C' language constructs to the algorithms to write a 'C' language program.

Program Outcomes:

1. Appreciate and understand the working of a digital computer
2. Analyse a given problem and develop an algorithm to solve the problem
3. Use the 'C' language constructs in the right way
4. Design, develop and test programs written in 'C'

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.

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.

1. Article reference chapter 1,2 from the book by E Balagurusamy – Programming in ANSIC – Tata McGraw-Hill publications.

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

1. Article reference chapter 3,,4 from the book by E Balagurusamy – Programming in ANSIC – Tata McGraw-Hill publications.

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.

1. Article reference chapter 5,6 from the book by E Balagurusamy – Programming in ANSIC – Tata McGraw-Hill publications.

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.

1. Article reference chapter 7,8 from the book by E Balagurusamy – Programming in ANSIC – Tata McGraw-Hill publications.

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 – Introduction to C++ language ,difference between c and c++ ,Basic oops concepts
Datatypes and operators in C++

1. Article reference chapter 9,10 from the book by E Balagurusamy – Programming in ANSIC – Tata McGraw-Hill publications.

BOOKS

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

SRR&CVR GOVT DEGREE(A) COLLEGE VIJAYAWADA
I B.Sc(COMPUTER SCIENCE/DATA SCIENCE) CBCS SYLLABUS

W.E.F -2020-21

I YEAR

SEMESTER-II

PAPER -2

TITLE OF THE PAPER : DATA STRUCTURES USING C
DATA STRUCTURES USING C

Course Objectives:

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

Course Outcomes:

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

1. Understand available Data Structures for data storage and processing.
2. Comprehend Data Structure and their real-time applications - Stack, Queue, Linked List, Trees and Graph
3. Choose a suitable Data Structures for an application
4. Develop ability to implement different Sorting and Search methods
5. Have knowledge on Data Structures basic operations like insert, delete, search, update and traversal
6. Design and develop programs using various data structures
7. Implement the applications of algorithms for sorting, pattern matching etc

Program Outcomes:

1. student knows how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and its applications
2. Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs
3. Compare and contrast the benefits of dynamic and static data structures implementations
4. Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack.
5. Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing.

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'

1. Article reference chapters 1,2 from the book by "Data Structures Using C"
Yaswanth Kanitkar. TMH

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 Lists and Linked Lists, Dynamic Memory Allocation, Basic Linked List Operations, Doubly Linked List, Circular Linked List, Linked List versus Arrays

1. Article reference chapters 1,2 from the book by "Data Structures Using C"
Balagurusamy E. TMH

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- Deques, Priority Queues, Application of Queues

1. **Article reference chapters 3,4 from the book by “Data Structures Using C”**
Balagurusamy E. TMH

UNIT – IV:

Binary Trees: Introduction to Non- Linear Data Structures, Introduction Binary Trees, Types of Trees, Basic Definition of Binary Trees, Properties of Binary Trees, Representation of Binary Trees, Operations on a Binary Search Tree, Binary Tree Traversal, Heap tree, creation ,operations on Heap Tree

1. **Article reference chapters 4,5 from the book by “Data Structures Using C”**
Balagurusamy E. TMH

UNIT – V:

Searching and sorting: Sorting – An Introduction, Bubble Sort, Insertion Sort, Merge Sort, Searching – An Introduction, Linear or Sequential Search, Binary Search, Quick sort, Selection sort algorithms

Graphs: Introduction to Graphs, Terms Associated with Graphs, Sequential Representation of Graphs, Linked Representation of Graphs, Traversal of Graphs, Spanning Trees

Article reference chapters 5,6 from the book by “Data Structures Using C”
Balagurusamy E. TMH

BOOKS:

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

**SRR&CVR GOVT(A) COLLEGE VIJAYAWADA
REVISED CBCS-2020-21**

B.Sc(DATA SCIENCE)

I YEAR II SEMESTER SYLLABUS

INTRODUCTION TO DATA SCIENCE WITH R

Objective

Data Science is a fast-growing interdisciplinary field, focusing on the analysis of data to extract knowledge and insight. This course will introduce students to the collection, Preparation, analysis, modelling and visualization of data, covering both conceptual and practical issues. Examples and case studies from diverse fields will be presented, and hands-on use of statistical and data manipulation software will be included.

Outcomes

- i. Recognize the various discipline that contribute to a successful data science effort.
- ii. Understand the processes of data science identifying the problem to be solved, data collection, preparation, modelling, evaluation and visualization.
- iii. Be aware of the challenges that arise in data sciences.
- iv. Develop an appreciation of the many techniques for data modelling and mining.
- v. Be cognizant of ethical issues in many data science tasks.
- vi. Be comfortable using commercial and open source tools such as the R language and its associated libraries for data analytics and visualization.

Unit-I

Introduction to the field of data science, different types of data(Data Base data, data Warehouse data, Transaction Data, Stock Exchange Data, Time Series and Bio logical data) ; data collection.

Unit-II

Experimental design; data attributes; data cleaning; data characterization and analysis.

Unit-III

Data modelling and mining techniques; model evaluation; visualization; application of data science introducing to R – R Data structures – Help functions in R

Unit-IV

Vectors-Scalars-Declarations- recycling-Common Vector operations – Using all and any Vectorized operations-NA and NULL values – Filtering – Vectorized if- then else-Vector Equality – Vector Element names.

Creating matrices –Matrix operations-Applying Functions to Matrix Rows and Columns – Adding and deleting rows and columns.

Unit-V

Vector /Matrix Distinction –Avoiding Dimension Reduction –Higher Dimensional arrays – lists- Creating lists – General list operations – Accessing list components and values – applying functions to lists –recursive lists. Creating Data Frames – Matrix –like operations in frames – Merging Data Frames – Applying function to Data frames.

References

- 1.Nina Zumel, John Mount, “Practical Data Science with R”, Manning Publications, 2014.
- 2.Jure Leskovec, Anand Rajaraman, Jeffrey D.Ullman, “Mining of Massive Datasets”, Cambridge University Press, 2014.
- 3.Mark Gardener, “Beginning R - The Statistical Programming Language”, John Wiley & Sons, Inc., 2012.
- 4.W. N. Venables, D. M. Smith and the R Core Team, “An Introduction to R”, 2013.
- 5.Tony Ojeda, Sean Patrick Murphy, Benjamin Bengfort, Abhijit Dasgupta, “Practical Data Science Cookbook”, Packt Publishing Ltd., 2014.
- 6.Nathan Yau, “Visualize This: The FlowingData Guide to Design, Visualization, and Statistics”, Wiley, 2011.
- 7.Boris lublinsky, Kevin t. Smith, Alexey Yakubovich, “Professional Hadoop Solutions”, Wiley, ISBN: 9788126551071, 2015.

Student Activity

Databases need to undergo pre-processing to be useful for data mining. Dirty data can cause confusion for the data mining procedure, resulting in unreliable output. Data cleaning includes smoothing noisy data, filling in missing values, identifying and removing outliers, and resolving inconsistencies.

SRR&CVR GOVT DEGREE(A) COLLEGE VIJAYAWADA
LIFE SKILL COURSE
BASIC COMPUTER APPLICATIONS
I Year SEMESTER-I
FOR ALL GROUPS OF B.Sc. / B.Com / B.A/B.B.A
Revised Syllabus under CBCS w.e.f. 2020-2021

Semester	Course Code	Course Title	Hours	Credits
I	Life skill course	BASIC COMPUTER APPLICATIONS	30	2

Course Objectives:

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

Program 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.

1. Article reference chapters 1,2 from the book by Working in Microsoft Office – Ron Mansfield - TMH.

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.

1. Article reference chapters 3,4 from the book by Working in Microsoft Office – Ron Mansfield - TMH.

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.

1. Article reference chapters 4,5 from the book by Working in Microsoft Office – Ron Mansfield - TMH.

REFERENCE BOOKS:

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

SRR&CVR GOVT DEGREE(A) COLLEGE VIJAYAWADA
INFORMATION & COMMUNICATION TECHNOLOGY

SEMESTER -II
FOR ALL GROUPS OF B.Sc./B.Com/B.A/B.B.A

Syllabus under CBCS w.e.f.2020-21

Semester	Course Code	Course Title	Hours	Credits
II	Life skill Course	INFORMATION & COMMUNICATION TECHNOLOGY	30	2

Course Objectives:

This course aims at acquainting the students with basic ICT tools which help them in their day to day and life as well as in office and research.

Program outcomes:After completion of the course, student will be able to;

1. Understand the literature of social networks and their properties.
2. Explain which network is suitable for whom.
3. Develop skills to use various social networking sites like twitter, flickr, etc.
4. Learn few GOI digital initiatives in higher education.
5. Apply skills to use online forums, docs, spreadsheets, etc for communication, collaboration and research.
6. Get acquainted with internet threats and security mechanisms.

SYLLABUS:

UNIT-I: (08 hrs)

Fundamentals of Internet: What is Internet?, 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 .

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

UNIT-II:(08 hrs)

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

G-Suite: Google drive, Google documents, Google spread sheets, Google Slides and Google forms.

1. Article reference chapter 3,4 from book by In-line/On-line : Fundamentals of the Internet and the World Wide Web, 2/e – byRaymond Greenlaw and Ellen Hepp, Publishers : TMH
- 2.

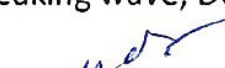
UNIT-III:(10 hrs)

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, SwayamPrabha, National Academic Depository, National Digital Library of India, E-Sodh-Sindhu, Virtual labs, e-acharya, e-Yantra and NPTEL).

1. Article reference chapter 4,5 from book by In-line/On-line : Fundamentals of the Internet and the World Wide Web, 2/e – byRaymond Greenlaw and Ellen Hepp, Publishers : TMH

Reference Books :

3. In-line/On-line : Fundamentals of the Internet and the World Wide Web, 2/e – byRaymond Greenlaw and Ellen Hepp, Publishers : TMH
 4. Internet technology and Web design, ISRD group, TMH.
 5. Information Technology – The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.
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Appendix - II
SRR & CVR Govt. Degree College(Autonomous)
III B.COM(COMPUTER APPLICATIONS)
Department of Commerce
DSC 1F 5.5 - Programming IN C
Syllabus 2020-21

Semester – V

Group: III B.Com(COMPUTER APPLICATIONS)

Course Objectives:

1. Learn how to solve common types of computing problems.
2. Learn data types and control structures of C
3. Learn to map problems to programming features of C.
4. Learn to write good portable C programs.

Course Outcomes:

Upon successful completion of the course, a student will be able to: 1. Appreciate and understand the working of a digital computer

2. Analyze a given problem and develop an algorithm to solve the problem
3. Improve upon a solution to a problem
4. Use the 'C' language constructs in the right way
5. Design, develop and test programs written in 'C'

Program Outcomes:

1. How to write a an flowchart and algorithm for given problem
2. How to write,save,edit and complile a C program
3. How to debug a C program
4. How to test and validate a 'C' program output

Unit- I:

Introduction to Algorithms and Programming Languages: Algorithm – Key features of Algorithms – Some more Algorithms – Flow Charts. **Introduction to C:** 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
Article for reference chapters 1,2,3 from book by E Balagurusamy, Computing Fundamentals & C Programming – Tata McGraw-Hill, 2008.

Unit-II:

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

Article for reference chapters 4,5 from book by E Balagurusamy, Computing Fundamentals & C Programming – Tata McGraw-Hill, 2008.

Unit- III:

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

Article for reference chapters 6 from book by E Balagurusamy, Computing Fundamentals & C Programming – Tata McGraw-Hill, 2008.

Unit- IV:

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, **Strings:** Introduction String and Character functions

Article for reference chapters 7,8 from book by E Balagurusamy, Computing Fundamentals & C Programming – Tata McGraw-Hill, 2008.

Unit-V:

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – - Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function. **Structure,**

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

Article for reference chapters 9,10 from book by E Balagurusamy, Computing Fundamentals & C Programming – Tata McGraw-Hill, 2008.

Reference Books:

1. Reema Thareja, Introduction to C programming, Oxford University Press.
2. E Balagurusamy, Computing Fundamentals & C Programming – Tata McGraw-Hill, 2008.
3. Ashok N Kamthane, Programming with ANSI and Turbo C, Pearson Publisher, 2002.
4. Henry Mulish & Hubert L.Coo Reema Thareja: The Spirit of C: An Introduction to Modern Programming, Jaico Publishing House, 1996.

Appendix-II.
SRR & CVR GOVT. DEGREE COLLEGE (AUTONOMOUS)
VIJAYAWADA

ELECTIVE-DSC 2F / Inter - disp
III B.Com(Computer Applications) – SEMESTER V 2020-21

DSC 2F 5.6 - Database Management System SYLLABUS

Course Objective:

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

Course Outcomes:

On completing the subject, students will be able to: 1. Design and model of data in database. 2. Store, Retrieve data in database.

Program Outcomes:

1. Student knows database structure and its design
2. Students are able to understand Different data models used for database design
3. Students are able to understand database transactions and data recovery
4. Students can use DML, DDL, DCL commands to manipulate data in the database

Unit-I: Overview of Database Management System: Introduction, Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management Systems, Classification of Database Management System.

Article for reference chapter 1 of book by Paneerselvam: Database Management Systems, PHI.

Unit-II: File-Based System: File-Based System, Drawbacks of File-Based System, DBMS Approach, Advantages of DBMS, Data Models, Components of Database System, Database Architecture, DBMS Vendors and their Products.

Article for reference chapters 2,3 of book by Paneerselvam: Database Management Systems, PHI.

Unit-III: Entity-Relationship Model: Introduction, The Building Blocks of an Entity-Relationship, Classification of Entity Sets, Attribute Classification, Relationship Degree, Relationship Classification, Generalization and Specialization, aggregation and composition, CODD'S Rules, Relational Data Model, Concept of Relational Integrity.

Article for reference chapters 3,4 of book by Paneerselvam: Database Management Systems, PHI.

Unit-IV: Structured Query Language: Introduction, History of SQL Standard, Commands in SQL, Data types in SQL, Data Definition Language (DDL), Selection Operation Projection Operation, Aggregate Functions, Data Manipulation Language, Table Modification, Table Truncation, Imposition of Constraints, Set Operations.

Article for reference chapter 7,8 of book by Paneerselvam: Database Management Systems, PHI.
(PTO)

Unit -V: PL/SQL: Introduction, Structure of PL/SQL, PL/SQL Language Elements ,Data Types, Control Structure,, Steps to Create a PL/SQL Program, Iterative Control ,Cursors , Steps to Create a Cursor , Procedure, Function ,Packages ,Exceptions Handling, Database Triggers, Types of Triggers.
Article for reference chapter 10,11 of book by Paneerselvam: Database Management Systems, PHI.

Reference Books:

1. Paneerselvam: Database Management Systems, PHI.
3. David Kruglinski, Osborne, Data Management System McGraw Hill Publication.
4. Shgirley Neal and Kenneth LC Trunik Database Management Systems in Business – PHI.
5. Godeon C. EVEREST, Database Management – McGraw Hill Book Company.
6. MARTIN, Database Management – Prentice Hall of India, New Delhi.
7. Bipin C. Desai, “An Introduction to Database Systems”, Galgotia Publications.
8. Korth, Database Management systems.
9. Navathe, Database Management systems.
10. S. Sumathi, S. Esakkirajan, Fundamentals of Relational Database Management Systems

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Appendix – II
SRR & CVR Govt. Degree College(Autonomous)
Department of Commerce
III B.COM(COMPUTER APPLICATIONS) V SEMESTER 2020-21
DSC 3F 5.7 - Web Technology
SYLLABUS

Semester – V

Group: III B.Com(CA)

Course- Objective

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

Course Outcome

1. To understand the web architecture and web services.
2. To practice latest web technologies and tools by conducting experiments.
3. To design interactive web pages using HTML and Style sheets.
4. To study the framework and building blocks of .NET Integrated Development Environment.
5. To provide solutions by identifying and formulating IT related problems.

Program Outcome

1. Webpage design and Web services implementation.
2. Dynamic Web site design and implementation
3. Create interactive web pages
4. Web server architecture and implementation

Unit-I: Introduction: HTML, XML, and WWW, Topologies, Bus, Star, Ring, Hybrid, Tree, Lan, Wan, Man. **HTML:** Basic HTML, Document body, Text, Hyper links, Adding more formatting, Lists, Tables using colors and images. **More HTML:** Multimedia objects, Frames, Forms towards interactive, HTML document heading.

Article for reference chapters 1,2, from book by Uttam Kumar Roy, Web Technologies, Oxford University Press.

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.

Article for reference chapters 3 from book by Uttam Kumar Roy, Web Technologies, Oxford University Press.

Unit-III: Introduction to JavaScript: What is DHTML, JavaScript, basics, variables, string manipulations, mathematical functions, statements, operators, arrays, functions.

Article for reference chapters 4,5 from book by Uttam Kumar Roy, Web Technologies, Oxford University Press.

Unit-IV: Objects in JavaScript: Data and objects in JavaScript, regular expressions, exception handling, built-in objects, events.

Article for reference chapters 7,8 from book by Uttam Kumar Roy, Web Technologies, Oxford University Press.

Unit-V: DHTML with JavaScript: Data validation, opening a new window, messages and confirmations, the status bar, different frames, rollover buttons, moving images, multiple pages in single download, text only menu system.

Article for reference chapters 9,10 from book by Uttam Kumar Roy, Web Technologies, Oxford University Press.

References:

1. Uttam Kumar Roy, Web Technologies, Oxford University Press.
2. Black Book HTML 5.0
3. Complete reference HTML 5.0
4. Web Technology, PHI Publications.

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Appendix - II
SRR & CVR Govt. Degree College (Autonomous) – VIJAYAWADA
Second Year B.Com (Computer Applications-E.M) – Third Semester 2020-21
DSC 3C-Office Automation Tools
Syllabus 2020-21

Course Objective:

Office tools course would enable the students in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools. To familiarize the students in preparation of documents and presentations with office automation tools.

Course Outcomes:

By learning the course, the students will be able to perform documentation to perform accounting operations to perform presentation skills

Program Outcomes:

1. How to do calculations, analyse and prepare chart for given data
2. How to create a database
3. How to store, retrieve and modify database
4. How to create forms and reports on a database

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

Article reference chapters 1,2 from book by Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)

Unit-II: Formatting options: Different formatting options, change row height, formulae and functions, **Functions:** Meaning and advantages of functions, different types of functions available in Excel.

Article reference chapters 3,4 from book by Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)

Unit-III: Charts: Different types of charts, Parts of chart, chart creation using wizard, chart operations, data maps, graphs, data sorting, filtering. Excel sub totals, scenarios, what-if analysis **Macro:** Meaning and advantages of Macros, creation, deletion of macros - Creating a macro, how to run, how to delete a macro. Create a worksheet to prepare a monthly expenditure of your home.

Article reference chapters 4,5 from book by Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)

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Unit-IV: MS Access: Creating a Simple Database and Tables: Features of Ms-Access, Creating a Database, Parts of Access. **Tables:** table creation using design view, table wizard, data sheet view, import table, link table. **Forms:** The Form Wizard, design view, columnar, tabular, data sheet, chart wizard.

Article reference chapters 5,6 from book by Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)

Unit- V: Finding, Sorting and Displaying Data: Queries and Dynasets, Creating and using select queries, Returning to the Query Design, Multi-level sorts, Finding incomplete matches, showing All records after a Query, saving queries - Crosstab Queries. **Printing Reports:** Form and Database Printing.

Article reference chapters 7,8 from book by Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)

Reference Books:

- 1.Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)
- 2.Ed Bott, Woody Leonhard, Using Microsoft Office 2007, Pearson Education(2007)
3. Sanjay Saxena, Microsoft Office, 4.Microsoft Office, BPB Publications

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SRR & CVR Govt. Degree College (Autonomous)
Department of Commerce

IB.COM(CA) REVISED CBCS Syllabus 2020-21

Semester – I

Subject: INFORMATION TECHNOLOGY

Group: B.com (CA)

Unit-I: Introduction:

Computer Definition - Characteristics and limitations of computer Hardware - Generations of Computer, Classification of Computers, Applications of Computer, Basic Components of PC, Computer Architecture - primary and secondary memories-input and output devices operating system-function of operating system-types of operating system-languages and its types

Unit-II: MS word:

Word processing-Features-Advantages and Applications-parts of word window-Toolbar-Creating, saving, closing, opening and editing of a document-Moving and Coping a text-Formatting of Text and paragraph-bullets and Numbering-Find and Replace-Insertion of objects-Headers and footers-page formatting-auto correct-spelling and grammar-mail merge-macros

Unit-III: MS Excel:

Features – spread sheet-Workbook-Cell-Parts of a window-Saving, closing, opening of a work book-Editing-advantages-formulas-types of function-templates-macros-sorting- charts - filtering-consolidation-grouping-pivot table

Unit-IV: MS Power point:

Introduction – Starting-parts-Creating of tables-create presentation-templates-Auto content Wizard-Slide show-Editing of presentation-Inserting objects and charts

Unit-V: MS Access:

Orientation to Microsoft Access - Create a Simple Access Database - Working with Table Data - Modify Table Data - Sort and Filter Records - Querying a Database - Create Basic Queries - Sort and Filter Data in a Query - Perform Calculations in a Query - Create Basic Access Forms - Work with Data on Access Forms - Create a Report - Add Controls to a Report - Format Reports

Reference Books:

1. P.Mohan computer fundamentals- Himalya Publications.
2. R.K.Sharma and Shashi K Gupta, computer fundamentals - Kalyani Publications
3. Fundamentals of Computers by Balagurusamy, Mcgraw Hill
4. Computer Fundamentals Anita Goel Pearson India
5. Introduction to Computers Peter Norton
6. Fundamentals of Computers Rajaraman V Adabala N
7. Office 2010 All-in-One For Dummies Peter Weverka
8. MS-Office S.S.Shrivastava
9. MS-OFFICE 2010 Training Guide Prof. Satish Jain, M. Geetha, Kratika BPB Publications.

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SRR & CVR Govt. Degree College (Autonomous)
Department of Commerce
Syllabus 2020-21

Semester – II

Subject: E-Commerce & Web Designing

Group: B.com (CA)

Unit I: Introduction:

Meaning, nature, concepts, advantages, disadvantages and reasons for transacting online, types of E-Commerce, e-commerce business models (introduction, key elements of a business model and categorizing major E-commerce business models), forces behind e-commerce.

Technology used in E-commerce: The dynamics of World Wide Web and internet (meaning, evolution and features); Designing, building and launching e-commerce website (A systematic approach involving decisions regarding selection of hardware, software, outsourcing vs. in-house development of a website)

Unit II: Security and Encryption:

Need and concepts, the e-commerce security environment: (dimension, definition and scope of e-security), security threats in the E-commerce environment (security intrusions and breaches, attacking methods like hacking, sniffing, cyber-vandalism etc.), technology solutions (Encryption, security channels of communication, protecting networks and protecting servers and clients)

Unit III: E-payment System:

Models and methods of e-payments (Debit Card, Credit Card, Smart Cards, e-money), digital signatures (procedure, working and legal position), payment gateways, online banking (meaning, concepts, importance, electronic fund transfer, automated clearing house, automated ledger posting), risks involved in e-payments.

Unit IV: On-line Business Transactions:

Meaning, purpose, advantages and disadvantages of transacting online, E-commerce applications in various industries like {banking, insurance, payment of utility bills, online marketing, e-tailing (popularity, benefits, problems and features), online services (financial, travel and career), auctions, online portal, online learning, publishing and entertainment} Online shopping (Amazon, Snap deal, Alibaba, Flipkart, etc.)

Unit V: Website designing

Designing a home page, HTML document, Anchor tag Hyperlinks, Head and body section, Header section, Title, Prologue, links, colorful pages, comment, body section, heading horizontal ruler, paragraph, tabs, images and pictures, lists and their types, nested lists, table handling. Frames: Frameset definition, frame definition, nested framesets, Forms and form elements. DHTML and Style Sheets: defining Styles, elements of styles, linking a style sheet to a HTML document, inline styles, External style sheets, internal Style sheets & Multiple Style Sheets.

References:

1. E-commerce and E-business Himalaya publishers
2. E-Commerce by Kenneth C Laudon, PEARSON INDIA
3. Web Design: Introductory with MindTap Jennifer T Campbell, Cengage India
4. HTML & WEB DESIGN: TIPS & TECHNIQUES JAMSA, KRIS, McGraw Hill
5. Fundamentals Of Web Development by Randy Connolly, Ricardo Hoar, Pearson
6. HTML & CSS: COMPLETE REFERENCE POWELL, THOMAS, McGraw Hill

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SRR & CVR Govt. Degree College (Autonomous)
Department of Commerce
Syllabus 2020-21
Subject: E-Commerce

Semester – II

Group: II BBA

Unit-I:

Electronic Commerce: Definition, Types, advantages and disadvantages, E-Commerce transaction on World Wide Web. Electronic market-Online shopping, Three models of Electronic Market - e-Business.

Unit-II:

Supply Chain Management: Definition, Benefits, goals, functions, characteristics, Strategies of SCM, Electronic logistics and its implementation in business houses - Electronic Data Interchange (EDI): Benefits of EDI, applications, limitations, EDI Model.

Unit-III:

Electronic Payment Systems: Types of EPS- Traditional and Modern payment systems, electronic cash, steps for electronic payment, payment security -e-Security- cryptography, hacker, secure electronic transaction, secure-socket layer.

Unit-IV:

Customer Relationship Management: Components of CRM, CRM Architecture, architectural components of a CRM solution, Electronic CRM, Need for Electronic CRM, E-CRM applications.

Unit-V:

HTML- Navigating the World Wide Web, Preparing to Publish on the Web, HTML and XHTML, Learning the basics of HTML, structure of HTML, creating simple web pages, formatting text with HTML, adding images, color and background, table creation, designing forms.

References:

1. PT Joseph SJ, E-Commerce: An Indian Perspective, Prentice Hall of India.
2. Effrain Turban, Joe Lee, David Kind-H Michael Chung, E-Commerce, A Management Perspective - Pearson Education Asia.
3. Pandey US & Shukla Er.S., E-Commerce & M-Commerce Technology, S.Chand& Company New Delhi.
4. Gary P. Schneider, E-Commerce Strategy Technology & Implementation, Cengage Learning, New Delhi-2009.
5. Trepper, E-Commerce Strategies, PrenticeHall of India, New Delhi. 2006
6. Jonathan Reynolds, E-Business A Management Perspective, Oxford University Press.

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SRR&CVR GOVT(A) DEGREE COLLEGE VIJAYAWADA
Department of Commerce and
Business Management (BBA)

III B.B.A – SEMESTER V 2020-21
DSC 1E: e-Commerce SYLLABUS

Course Objectives:

The objectives of the course are to introduce the concept of electronic commerce, and to understand how electronic commerce is affecting business enterprises, governments, consumers and people in general. Acquaint students with a fundamental understanding of the environment and strategies in the New Economy.

Course Outcomes:

The aim of the course is to introduce students to: (1) the fundamental principles of eBusiness and e-Commerce and the role of Management, (2) the underlying used technologies with emphasis on Internet Technologies, and (3) the application of tools and services to the development of small scale e-Commerce applications. Upon successful completion of the course students will be able to: • Recognize the impact of Information and Communication technologies, especially of the Internet in business operations • Recognize the fundamental principles of e-Business and e-Commerce • Distinguish the role of Management in the context of e - Business and e -Commerce

Program Outcomes:

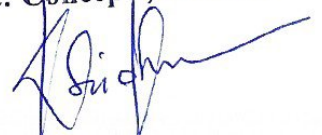
Explain the added value, risks and barriers in the adoption of e -Business and e-Commerce • Examine applications of e-Commerce in relation to the applied strategic • Develop and publish web pages using HTML5, CSS3 and Javascript • Use tools and services of the internet in the development of a virtual e - commerce site

Unit-I: Electronic Commerce: Definition, types, advantages and disadvantages, E-Commerce transaction on World Wide Web. Electronic Market-Online shopping, Three models of Electronic Market - E-Business.

Article reference chapters 1,2 from book by CSV Murthy, E-Commerce: Concepts, Models, Strategies, Himalaya Publishing House.

Unit-II: Supply Chain Management: Definition, Benefits, goals, functions, characteristics, Strategies of SCM, Electronic Logistics and its implementation in business houses Electronic Data Interchange (EDI): Definition, benefits of EDI, applications, advantages and limitations, EDI Model.

Article reference chapters 3,4 from book by CSV Murthy, E-Commerce: Concepts, Models, Strategies, Himalaya Publishing House.



Unit-III: Electronic Payment Systems: Types of EPS- traditional payment system and modern payment system, electronic cash, steps for electronic payment, payment security - E-Security- cryptography, hacker, secure electronic transaction, secure-socket layer.

Article reference chapters 4,5 from book by CSV Murthy, E-Commerce: Concepts, Models, Strategies, Himalaya Publishing House.

Unit-IV: Customer Relationship Management: Definition, Components of CRM, CRM Architecture, architectural components of a CRM solution, Electronic CRM, Need for Electronic CRM, E-CRM applications

Article reference chapters 6,7 from book by CSV Murthy, E-Commerce: Concepts, Models, Strategies, Himalaya Publishing House.

Unit-V: HTML- Navigating the World Wide Web, Preparing to Publish on the Web, HTML and XHTML, Learning the Basics of HTML, structure of HTML, Creating simple web pages, formatting text with HTML, adding images, color and background, table creation, designing forms.

Article reference chapters 8,9 from book by CSV Murthy, E-Commerce: Concepts, Models, Strategies, Himalaya Publishing House.

References:

1. CSV Murthy, E-Commerce: Concepts, Models, Strategies, Himalaya Publishing House.
2. Laura Lemay; Rafe Colburn, Teach Yourself Web with HTML in 24 Hours, Sams Publishing
3. Steven Holzner, HTML Black Book, Dream Tech Press.

