

SRI VENKATESWARA UNIVERSITY : TIRUPATI

PROGRAMME: THREE-YEAR DEGREE

B Com (Computer Applications and Business Analytics)

Domain Subject: Commerce

Semester-wise Syllabus under CBCS(w.e.f. 2020-21 Admitted Batch)

I Year B Com Semester-I (Common to CA and Business Analytics)

Discipline: COMPUTER APPLICATIONS AND BUSINESS ANALYTICS

Course 1C:Information Technology

Model Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

A. Remembers and states in a systematic way (Knowledge)

1. Describe the fundamental hardware components that make up a computer's hardware and the role of each of these components
2. understand the difference between an operating system and an application program, and what each is used for in a computer
3. Use technology ethically, safely, securely, and legally
4. Use systems development, word-processing, spreadsheet, and presentation software to solve basic information systems problems

B. Explains (Understanding)

5. Apply standard statistical inference procedures to draw conclusions from data
6. Retrieve information and create reports from databases
7. Interpret, produce, and present work-related documents and information effectively and accurately

*C. Critically examines, using data and figures (Analysis and Evaluation**)*

8. Analyse compression techniques and file formats to determine effective ways of securing, managing, and transferring data

9. Identify and analyse user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing based systems.
10. Analyse a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
11. Identify and analyse computer hardware, software

D. Working in 'Outside Syllabus Area' under a Co-curricular Activity (Creativity) Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

E. Efficiently learn and use Microsoft Office applications.

Syllabus:

Course 1C :Information Technology

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

Unit	Details
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
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
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
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

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

Learning Resources (Course 1C:Information Technology)

References:

- (1) P.Mohan computer fundamentals- HimalayaPublications.
- (2) R.K.Sharma and Shashi K Gupta, Computer Fundamentals - Kalyani Publications
- (3) Fundamentals of Computers ByBalagurusamy, 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, KratikaBPB Publications

Online Resources:

<https://support.office.com/en-us/office-training-center>
<https://www.skillshare.com/browse/microsoft-office>
https://www.tutorialspoint.com/computer_fundamentals/index.htm
<https://www.javatpoint.com/computer-fundamentalstutorial>
<https://edu.gcfglobal.org/en/subjects/office/>
<https://www.microsoft.com/en-us/learning/training.aspx>

Practical Component: @ 2 hours/week/batch

- MS word creation of documents letters invitations etc, tables, mailmerge, animations in word, formatting text
- MS Excel performing different formulas, creating charts, macros
- MS power point slide creation, creation of animation
- MS Access creation of database, forms and reports

RECOMMENDED CO-CURRICULAR ACTIVITIES:

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

Measurable

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

General

1. Group Discussion
2. Visit to Software Technology parks / industries

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

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

SRI VENKATESWARA UNIVERSITY

B.A. COMPUTER APPLICATIONS

FIRST YEAR - SECOND SEMESTER

(Under CBCS W.E.F. 2020-21)

Course – 2: E- Commerce & Web Designing

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

Learning Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

A. Remembers and states in a systematic way (Knowledge)

1. Understand the foundations and importance of E-commerce
2. Define Internet trading relationships including Business to Consumer, Business-to-Business, Intra-organizational
3. Describe the infrastructure for E-commerce
4. Discuss legal issues and privacy in E-Commerce
5. Understand the principles of creating an effective web page, including an in-depth consideration of information architecture

B. Explains (Understanding)

6. Recognize and discuss global E-commerce issues
7. Learn the language of the web: HTML and CSS.

C. Critically examines, using data and figures (Analysis and Evaluation)

8. Analyze the impact of E-commerce on business models and strategy
9. Assess electronic payment systems
10. Exploring a web development framework as an implementation example and create dynamically generated web site complete with user accounts, page level security, modular design using css

D. Working in ‘Outside Syllabus Area’ under a Co-curricular Activity(Creativity)

Use the Systems Design Approach to implement websites with the following steps:

- Define purpose of the site and subsections
- Identify the audience

- Design and/or collect site content
- Design the website theme and navigational structure
- Design & develop web pages including: CSS Style Rules, Typography, Hyperlinks, Lists, Tables, Frames, Forms, Images, Behaviours, CSS Layouts

E. Build a site based on the design decisions and progressively incorporate tools and techniques covered.

SRI VENKATESWARA UNIVERSITY
B.A. COMPUTER APPLICATIONS
FIRST YEAR - SECOND SEMESTER
(Under CBCS W.E.F. 2020-21)
Course – 2: E- Commerce & Web Designing
SYLLABUS

Unit

I 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)

II Unit-II: 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.

III Unit-III: 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.)

IV Unit-IV: 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.

V Unit V: Security and Encryption:

Need and Concepts, 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)

Learning Resources (E-commerce & Web Designing)

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, McGrawHill

Online Resources:

<http://www.kartrocket.com>
<http://www.e-commerceceo.com>
<http://www.fastspring.com>
<http://teamtreehouse.com/tracks/web-design>

Practical Component: @ 2 hours/week/batch

1. Creation of simple web page using formatting tags
2. Creation of lists and tables with attributes
3. Creation of hyperlinks and including images
4. Creation of forms
5. Creation of framesets
6. Cascading style sheets – inline, internal and external

RECOMMENDED CO-CURRICULAR ACTIVITIES:

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

MEASURABLE

1. Assignments (in writing and doing forms on the aspects of syllabus content and outside the syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity)
3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups as teams)
4. Field studies (individual observations and recordings as per syllabus content and related areas (Individual or team activity)

5. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity))

GENERAL

Group Discussion

Visit to Software Technology parks / industries

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

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

SRI VENKATESWARA UNIVERSITY

B.A. DEGREE COURSE IN COMPUTER APPLICATIONS

FIRST YEAR - SECOND SEMESTER

(Under CBCS W.E.F. 2020-21)

Course – 2: E- Commerce & Web Designing

MODEL QUESTION PAPER

Time: 3 hours

Marks: 75 marks

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer any five of the following questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks

PART – A

Answer any Five of the following question.

(5X5=25M)

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

PART – B

Answer All The Questions. Each question carries 10 marks (5X10= 50M)

11.	(A)
	OR
	(B)
12.	(A)
	OR
	(B)
13.	(A)
	OR
	(B)
14.	(A)
	OR
	(B)
15.	(A)
	OR
	(B)

SRI VENKATESWARA UNIVERSITY
B.A. / B.Sc COMPUTER APPLICATIONS
III SEMESTER
(Under CBCS W.E.F. 2021-22)

PROGRAMMING WITH C & C++

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

Model Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

A. Remembers and states in a systematic way (Knowledge)

1. Develop programming skills
2. Declaration of variables and constants use of operators and expressions
3. learn the syntax and semantics of programming language
4. Be familiar with programming environment of C and C++
5. Ability to work with textual information (characters and strings) & arrays

B. Explains (Understanding)

6. Understanding a functional hierarchical code organization
7. Understanding a concept of object thinking within the framework of functional model
8. Write program on a computer, edit, compile, debug, correct, recompile and run it

C. Critically examines, using data and figures (Analysis and Evaluation)

9. Choose the right data representation formats based on the requirements of the problem
10. Analyze how C++ improves C with object-oriented features
11. Evaluate comparisons and limitations of the various programming constructs and choose correct one for the task in hand.

- D. Working in 'Outside Syllabus Area' *under a Co-curricular Activity*
(Creativity)

Planning of structure and content, writing, updating and modifying
computer programs for user solutions

- E. Exploring C programming and Design C++ classes for code reuse
(Practical skills***)

PROGRAMMING WITH C & C++

SYLLABUS

Unit

I Introduction and Control Structures:

History of 'C' - Structure of C program - C character set, Tokens, Constants, Variables, Keywords, Identifiers - C data types - C operators - Standard I/O in C - Applying if and Switch Statements

II Loops And Arrays:

Use of While, Do While and For Loops - Use of Break and Continue Statements - Array Notation and Representation - Manipulating Array Elements - Using Multi Dimensional Arrays

III Strings and Functions:

Declaration and Initialization of String Variables - String Handling Functions - Defining Functions - Function Call - Call By Value, Call By Reference - Recursion

IV Classes and Objects

Introduction to OOP and its basic features - C++ program structure - Classes and objects - Friend Functions- Static Functions -Constructor - Types of constructors - Destructors - Unary Operators

V Inheritance:

Inheritance - Types of Inheritance -Types of derivation- Public - Private - Protected Hierarchical Inheritance - Multilevel Inheritance - Multiple Inheritance - Hybrid Inheritance

Learning Resources (Course 3C: : Programming with C & C++)

References:

- (1) E. Balagurusamy "Object oriented programming with C++
- (2) R.Ravichandran "Programming with C++"
- (3) **Mastering C by K R Venugopal and Sudeep R Prasad, McGraw Hill**
- (4) Expert C Programming: Deep Secrets Kindle Edition [Peter van der Linden](#)
- (5) Let Us C [YashavantKanetkar](#)
- (6) The C++ Programming Language [Bjarne Stroustrup](#)
- (7) C++ Primer [Stanley B. Lippman](#), [Josée Lajoie](#), [Barbara E. Moo](#)

Online Resources:

<https://www.tutorialspoint.com/cprogramming/index.html>
<https://www.learn-c.org/>
<https://www.programiz.com/c-programming>
<https://www.w3schools.in/c-tutorial/>
<https://www.cprogramming.com/tutorial/c-tutorial.html>
<https://www.tutorialspoint.com/cplusplus/index.html>
<https://www.programiz.com/cpp-programming>
<http://www.cplusplus.com/doc/tutorial/>
<https://www.learn-cpp.org/>
<https://www.javatpoint.com/cpp-tutorial>

Practical Component: @ 2 hours/week/batch

1. Write C programs for
 - a. Fibonacci Series
 - b. Prime number
 - c. Palindrome number
 - d. Armstrong number.
2. 'C' program for multiplication of two matrices

3. 'C' program to implement string functions
4. 'C' program to swap numbers
5. 'C' program to calculate factorial using recursion
6. 'C++' program to perform addition of two complex numbers using constructor
7. Write a program to find the largest of two given numbers in two different classes using friend function
8. Program to add two matrices using dynamic constructor
9. Implement a class string containing the following functions:
 - a. Overload + operator to carry out the concatenation of strings.
 - b. Overload == operator to carry out the comparison of strings.
10. Program to implement inheritance.

RECOMMENDED CO-CURRICULAR ACTIVITIES:

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

MEASURABLE

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

General

Group Discussion

Visit to Software Technology parks / industries

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted:

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

SRI VENKATESWARA UNIVERSITY

B.A. / B.Sc., DEGREE COURSE IN COMPUTER APPLICATIONS

III SEMESTER - W.E.F. 2021-22

PROGRAMMING WITH C & C++

MODEL QUESTION PAPER

Time: 3 hours

Marks: 75 marks

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer any five of the following questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks

PART – A

Answer any Five of the following question.

(5X5=25M)

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

PART – B

Answer All The Questions. Each question carries 10 marks (5X10= 50M)

11.	(A) OR (B)
12.	(A) OR (B)
13.	(A) OR (B)
14.	(A) OR (B)
15.	(A) OR (B)

SRI VENKATESWARA UNIVERSITY : TIRUPATI

B.A. / B.Sc., (COMPUTER APPLICATIONS)

SEMESTER IV

Sl. No.	Paper	Name of the Subject
1	IV	Object Oriented Programming with Java
2	V	Data Base Management System

SRI VENKATESWARA UNIVERSITY
CBCS – UG SYLLABUS
(w.e.f. 2021-22)
BA/ B.Sc/B.Com (COMPUTER APPLICATIONS)

IV Semester

Course 4E: Object Oriented Programming with Java

Learning Outcomes:

At the end of the course, the student will be able to;

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

SYLLABUS:

Unit I: Introduction to OOPs: Problems in Procedure Oriented Approach, Features of Object Oriented Programming

Introduction to Java: Features of Java, The Java Virtual Machine (JVM), Parts of Java program, Naming Conventions in Java, Data Types in Java, Operators in Java, Reading Input using scanner Class, Displaying Output using System.out.println (), Command Line Arguments.

Unit II: Control Statements in Java: if... else, do... while Loop, while Loop, For loop, Switch Statement, break Statement, continue Statement

Arrays: Types of Arrays, array name, length,

Strings: Creating Strings, String Class Methods, String Comparison, Immutability of Strings.

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

Inheritance: Inheritance, Types of Inheritance

Polymorphism: Method overloading, Operator overloading

Abstract Classes: Abstract Method and Abstract Class

Unit IV: Packages: Package, Different Types of Packages, Creating Package and Accessing a Package

Streams: Stream classes, Creating a File using File Output Stream, Reading Data from a File using File Input Stream, Creating a File using File Writer, Reading a File using File Reader

Unit V: Exception Handling: Errors in Java Program, Exceptions, throws Clause, throw Clause, Types of Exceptions

Threads: Single Tasking, Multi-Tasking, Uses of Threads, Creating a Thread and Running it, Terminating the Thread, Thread Class Methods.

References:

1. The Complete Reference JAVA Seventh Edition Herbert Schildt. Tata McGraw Hill Edition.
2. Core Java: An Integrated Approach, Dr. R. Nageswara Rao & Kogent Learning Solutions Inc.
3. E. Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGrawHill Company

Online Resources:

<https://stackify.com/java-tutorials/>
<https://www.w3schools.com/java/>
<https://www.javatpoint.com/java-tutorial>
<https://www.tutorialspoint.com/java/index.html>

Practical Component:@ 2 hours/week/batch

1. Write a program to implement command line arguments.
2. Write a program to read Student Name, Reg.No, Marks and calculate Total, Percentage, and Result. Display all the details of students .
3. Write a program to perform String Operations.
4. Java program to implement Addition of two N X N matrices.
5. Java program to implement bubble sort.
6. Java program to demonstrate the use of Constructor.
7. Calculate area of the following shapes using method overloading.
 - a. Rectangle
 - b. Circle
 - c. Square
8. Implement multilevel inheritance
9. Java program for to display Serial Number from 1 to 5 by creating two Threads
10. Java program to demonstrate the following exception handlings
 - a. Divided by Zero
 - b. Array Index Out of Bound
 - c. Arithmetic Exception

SRI VENKATESWARA UNIVERSITY : TIRUPATI

B.A. / B.Sc. / B.Com., (COMPUTER APPLICATIONS)

SEMESTER IV

Course 4F: DATABASE MANAGEMENT SYSTEM

Learning Outcomes:

At the end of the course, the student will be able to;

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

Unit	Details
I	Overview of Database Management System Introduction, Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management System, Classification of Database Management System.
II	File-Based System File Based System. Drawbacks of File-Based System, DBMS Approach, Advantage of DBMS, Data Models, Components of Database System, Database Architecture, DBMS Vendors and their products.
III	Entity-Relationship Model: Introduction, The Building Blocks of an Entity-Relationship, Classification of Entity Set, Attribute Classification, Relationship Degree, Relationship Classification, Generalization and Specialization, Aggregation and Composition, CODD's Rules, Relational Data Model, Concept of Relational Integrity.

IV Structured Query Language

Introduction, History of SQL Standards, 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.

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, Functions, Packages, Exceptions Handling, Database Triggers, Types of triggers.

Learning Resources (Course 4F: Database Management System)

REFERENCES:

1. Paneerselvam: Database Management system, PHI.
2. David Kuklinski, Osborne, Data management system McGraw Hill Publication.
3. Shgirley Neal And Kenneth LC Trunik Database management system in Business-PHI.
4. Godeon C. EVEREST, Database Management-McGraw Hill Book Company.
5. MARTIN, Database Management-Prentice Hall of India, New Delhi.
6. Bipin C. Desai, 'An Introduction to Database System', Galgotia Publications
7. Korth, Database Management System.
8. Navathe, Database Management System.
9. S. Sumathi, S. Esakkirajan, Fundamentals of Relational Database Management System

Online resources:

[http:// www.onlinegdb.com/](http://www.onlinegdb.com/)

[http:// www.tutorialspoint.com/](http://www.tutorialspoint.com/)

<http://learnsql.com>

<https://www.codecademy.com/learn/learn-sql/>

<https://www.w3schools.com/sql/default.asp>

Practical Component: @ 2 hours/week/batch

1. Create tables department and employee with required constraints.
2. Initially only the few columns (essential) are to be added. Add the remaining columns separately by using appropriate SQL command.
3. Basic column should not be null
4. Add constraint that basic should not be less than 5000.
5. Calculate hra, da, gross and net by using PL/SQL program.
6. The percentage of hra and da are to be stored separately.
7. When the da becomes more than 100%, a message has to be generated and with user permission da has to be merged with basic.
8. Empno should be unique and has to be generated automatically.

RECOMMENDED CO-CURRICULAR ACTIVITIES:

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

Measurable

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

General

1. Group Discussion
2. Visit to Software Technology parks / industries

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted:

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

ELECTIVE 2 - COMPUTER APPLICATIONS

DSC F 5.4 - DATABASE MANAGEMENT SYSTEM

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.

Unit-II: 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.

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 key, Relational Integrity. Normalization (1NF,2NF,3NF & BCNF).

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.

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.

Text Books:

1. S. Sumathi, S. Esakkirajan, Fundamentals of Relational Database Management Systems.
2. Ivan Bayross, SQL, PL/SQL The Programming Language of Oracle, BPB Publications.

Reference Books:

1. Paneerselvam: Database Management Systems, PHI.
2. Bipin C. Desai, "An Introduction to Database Systems", Galgotia Publications.
3. Korth, Database Management systems.
4. Navathe, Database Management systems.

SRI VENKATESWARA UNIVERSITY :TIRUPATI

THIRD YEAR BA / B.Com (CA) / B.Sc- 5th SEMESTER EXAMINATIONS

DSC F 5.4 - DATABASE MANAGEMENT SYSTEM

Time: 3Hrs

Max. Marks:75

Section - A

Answer any Five of the following. All Questions carry equal marks.

5x3=15 Marks

1.

- a) What is DBMS? Objectives of DBMS.
- b) Write about Data types in SQL.
- c) Describe classification of entity sets.
- d) What is a procedure? Explain the steps to create a procedure.
- e) Write about primary key and foreign key constraints.
- f) Briefly explain Embedded SQL.
- g) Write about Data Models.
- h) Write about Relationship Classification.
- i) Write about exceptions in PL/SQL
- j) What is view and how to create a view in SQL.

Section - B

Answer one question from each unit. All Questions carry equal marks. 5*12=60 Marks

UNIT-1

2. Explain about file system.

(OR)

3. Explain classification of DBMS.

UNIT-2

4. Explain the process of converting ER Diagram to Tables.
(OR)
5. Define Specialization and Generalization. Explain the constraints on Generalization and Specialization with examples.

UNIT-3

6. Explain 1NF, 2NF, 3NF and BCNF.
(OR)
7. Explain CODD's rules.

UNIT-4

8. Explain DDL Commands with Syntax and examples.
(OR)
9. a) Explain join operations in SQL.
b) Explain Aggregate functions in SQL.

UNIT-5

10. Explain PL/SQL Structure with suitable example
(OR)
11. What is a Trigger? Explain the creation of different types of triggers with syntax.

DSC F 5.5 - WEB TECHNOLOGY**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.

Unit-II:

More HTML: Multimedia objects, Frames, Forms towards interactive, HTML document heading.

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

Unit-III:

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

Unit-IV:

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

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.

Text Books

1. Web Technology, Chris Bates, Wiley Publications.

Reference Books

1. Uttam Kumar Roy, Web Technologies, Oxford University Press.
2. Black Book HTML 5.0

3. Complete reference HTML 5.

SRI VENKATESWARA UNIVERSITY :TIRUPATI

THIRD YEAR BA / B.COM(CA) / B.Sc - 5TH SEMESTER EXAMINATIONS

DSC F 5.5 – WEB TECHNOLOGY

Time: 3Hrs

Max. Marks:75

Section - A

Answer any Five of the following. All Questions carry equal marks. 5×3=15 Marks

1.

- k) What is internet? And applications of Internet.
- l) What is network topology and types of topologies?
- m) Describe <HR> Tag.
- n) What is a frame? Explain the steps to create a frame in HTML.
- o) Write about box and color properties.
- p) Briefly explain string manipulations.
- q) Write about document object model.
- r) How to create new window in DHTML.
- s) How to create message and confirmation window in javascript.
- t) Write about status bar.

Section - B

Answer one question from each unit. All Questions carry equal marks. 5×12=60 Marks

UNIT-1

2. What is HTML? Explain structure of HTML and give suitable example.

(OR)

3. Explain about hyperlinks in HTML.

UNIT-2

4. What is style sheet? How to create a table with style sheets.

(OR)

5. Define different styles in CSS with examples.

UNIT-3

6. Explain javascript functions with suitable example.

(OR)

7. A). Write a program to demonstrate the radio buttons in javascript.

B). How to handle a list in javascript with proper example.

UNIT-4

8. A). Describe regular expressions in javascript.

B). How to handle errors in javascript.

(OR)

9. a) Explain join operations in SQL.

b) Explain Aggregate functions in SQL.

UNIT-5

10. Explain rollover buttons with suitable example.

(OR)

11. Explain about text only menu system with suitable example.

