

SKR & SKR Govt. College for Women(A), Kadapa.
NAAC Re- accredited – B Level
III BA(CA), V SEMESTER
DATABASE MANAGEMENT SYSTEMS

UNIT – I:

Data, Information, Data Vs Information, fields, records, files- Data Dictionary – Database - database Management system- operations performed on database systems,-Database Administrator (DBA), Functions and responsibilities of DBA- Database Environment- Advantages and disadvantages of DBMS- Data Models- Record based Data Models, Object bases data models, Physical data models, Hierarchical data model, Network data model, Relational data model, E-R Data Model, Object-oriented data model - RDBMS – Codd's Rules – Entity – Relationship (E-R) Modeling – Introduction –Basic E-R Concepts , Entities, Relationships, Attributes, constraints – Conversation of E-R model into Relations – Problems with E-R Models, E-R Diagram Symbols.

UNIT – II

Data Normalization – introduction – First Normal Form (1NF) Second Normal Form (2NF) – Third Normal Form (3NF) – Boyce – CODD Normal Form (BCNF) – Fourth Normal Form (4NF).

SQL – An overview of SQL – Terminology – Object name- categories of SQL commands – Create a table – create table, table name, Column name, Data type, width, Multiple column names , Integrity constraints, constraint name, Disable constraints- Comment lines – Alter Table structure- Alter a table – add Specification- Modify Specification – Drop Specification – Enable/Disable constraint – Rename a table-Drop a table

UNIT – III

Insert a Row- -verification – Commit, Rollback and Save Point – Substitution Variables- Forward slash- Default option – Update Rows – Update column values in rows, where clause – Comparison Operators – SQL operators- Between, in, like Null value-is Null- Not operator- Multiple conditions- check option- transfer data from old column to new column- Delete Rows – Delete from table – truncate – Query from tables- features of SQL – select statement, Group by clause, order by clause – Literal – Define – Double Ampersand(&&)- System table Dual and Tab.

UNIT – IV

Built-in Functions – Number Functions – Character Functions – Date Functions –Conversion functions – Group functions- Sub Query – Single value sub query - Multi-valued comparison- Multi-value sub query – Any. Some and All operators –Having Clause with sub query –Insert rows using Sub query – Update columns in Rows using sub query- sub query in From clause – sub query with nested group functions- with clause sub query- Joins – set operators – View – Define, Retrieve, rename and Drop View- DML operations using view- Advantage and disadvantages- Sequence – Create, alter, drop sequence – Index- Create, rename, rebuild and drop index.

UNIT – V

PL/SQL – Introduction, advantages of PL/SQL, Block structure of PL/SQL - Control flow statements – If Statements, Looping statements – While statement, for statement, loop – end loop statements – PL/SQL simple Programs – Procedures – Insert , update, delete and query a

row –exception handling – Exception Propagation - functions- Create, Call and Drop
function- packages – Create package header, create package body, execute and drop Package
– trigger – Create, Disable/enable and Drop trigger- Cursors – Introduction , cursor with for
loop, fetch cursor, populate table using cursor, cursor within cursor.

TEXT BOOKS

1. Database Systems: Concepts, Design and Applications By S. K. Singh, Pearson Education 2009
2. Learning Oracle SQL & PL/SQL: A Simplified Guide, By Rajeeb C. Chatterjee, PH of India.

REFERENCE BOOKS

1. Database Management Systems by Pannerselvam R and published by PH of India, New Delhi.
2. A Guide to Oracle by John Morrison, Mike Morrison – Galgotia Publishers
3. SQL, PL/SQL , the program language of oracle by Ivan Bayross, BPB Publications, 2nd Edition

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III BA(CA), V SEMESTER
E COMMERCE

Unit-I:

Electronic Commerce Environment and Opportunities: Background, The Electronic Commerce Environment, Electronic Market place Technologies. **Mode of Electronic Commerce:** Electronic Data Interchange, Migration to Open EDI, Electronic Commerce with WWW/Internet, Commerce Net Advocacy, Web Commerce going forward.

Unit-II:

Approaches to Safe Electronic Commerce: Secure Transport Protocols, Secure Transactions, Secure Electronic Payment Protocol (SEPP), Secure Electronic transaction (SET), Certificates for authentication Security on Web Servers and Enterprise Networks.

Unit-III:

Electronic Cash and Electronic Payment Schemes: Internet Monetary Payment & Security Requirements, Payment and Purchase Order Process, On-line Electronic cash. **Internet / Intranet Security Issues and Solution:** The need for Computer Security, Specific Intruder Approaches, Security Strategies, Security Tools, Encryption, Enterprise Networking and Access to the Internet, Antivirus Programs, Security Teams.

Unit-IV;

Master Card / Visa secure Electronic Transaction: Introduction, Business Requirements, Concepts, Payments Processing. **E-Mail and Secure E-Mail technologies for Electronic Commerce:** Introduction The Means of Distribution, A Model for Message Handling, E-Mail Handling, Multipurpose Internet Mail Extensions, Message Object Security Services, Comparisons of Security Methods, MIME and Related Facilities for EDI over the Internet.

Unit-V:

Internet Resources for Commerce Introduction: Introduction, Technologies for Web Servers, Internet Tools Relevant to Commerce, Internet Applications for Commerce, Internet Charges, Internet Access and Architecture.

Text Book:

Web Commerce Technology Handbook, by Daniel Minoli, Emma Minoli, McGraw-Hill

Reference Books:

1. David Whiteley, "E-Commerce", Tata McGraw Hill, 2000.
2. E Business by Parag Kulakarni and SunithaJahirabadkar from Oxford University Press.
3. E Business by Jonathan Reynolds from Oxford University Press.
4. Eframi Turban, Jae Lee, David King, K. Michael Chung, "Electronic Commerce", Pearson Education, 2000.
5. R. Kalakota and A. B. Whinston, Frontiers of Electronic Commerce, Addison Wesley.
6. David Kosiur, Understanding Electronic Commerce, Microsoft Press.
7. Soka, From EDI to Electronic Commerce, McGraw Hill.

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III B.A(CA), V SEMESTER
PHP and My SQL

Unit-I:

Building blocks of PHP: Variables, Data Types, Operators and Expressions, Constants.

Flow Control Functions in PHP: Switching Flow, Loops, Code Blocks and Browser Output.

Working with Functions: Defining Functions, Calling functions, returning the values from User-Defined Functions, Variable Scope, Saving State between Function calls with the Static statement, more about arguments.

Unit-II:

Working with Arrays: Arrays, Creating Arrays, Some Array-Related Functions. **Working**

with Objects: Creating Objects, Object Instance. **Working with Strings, Dates and Time:** Formatting Strings with PHP, Investigating Strings with PHP, Manipulating Strings with PHP, Using Date and Time Functions in PHP.

Unit-III:

Working with Forms: Creating Forms, Accessing Form - Input with User defined Arrays, Combining HTML and PHP code on a single Page, Using Hidden Fields to save state, Redirecting the user, Sending Mail on Form Submission, Working with File Uploads.

Unit-IV:

Working with Files and Directories: Including Files with include(), Validating Files, Creating and Deleting Files, Opening a File for Writing, Reading or Appending, Reading from Files, Writing or Appending to a File, Working with Directories, Open Pipes to and from Process Using popen (), Running Commands with exec(), Running Commands with system () or passthru ().

Working with Images: Understanding the Image-Creation Process, Necessary Modifications to PHP, Drawing a New Image, Getting Fancy with Pie Charts, Modifying Existing Images, Image Creation from User Input.

Unit-V:

Interacting with MySQL using PHP: MySQL Versus MySQLi Functions, Connecting to MySQL with PHP, Working with MySQL Data.

References:

1. Julie C. Meloni, PHP MySQL and Apache, SAMS Teach Yourself, Pearson Education (2007).
2. Xue Bai Michael Ekedahl, The Web Warrior Guide to Web Programming, Thomson (2006)

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Web Technology

Unit-I:

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

Unit-II:

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

Unit-III:

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

Unit-IV:

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

Unit-V:

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

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 5.0
4. Web Technology, PHI Publications.

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MULTIMEDIA SYSTEMS (Elective)

UNIT I:

What is Multimedia?: Definition – Where to use Multimedia – Delivering Multimedia
Text- The Power of Meaning – About Fonts and Faces – Using Text in Multimedia-
Computers and Text – Font Editing and Design Tools – Hyper Media and Hyper Text

UNIT II:

Images: Before you Start to Create – Making Still Images – Color – Image File Formats
Sound – The Power of Sound – Digital Audio – MIDI Audio – MIDI vs Digital Audio –
Multimedia System Sounds – Audio File Formats – Vaughans Law of Multimedia Minimums
– Adding Sound to your Multimedia Project

UNIT III:

Video: Using Video - How Video Works and is Displayed - Digital Video Containers -
Obtaining Video Clips - Shooting and Editing Video

Making Multimedia: The Stages of a Multimedia Project - What You Need: The
Intangibles- What You Need: Hardware - What You Need: Software - What You Need:
Authoring Systems

UNIT IV:

Multimedia Skills: The Team – The Sum of Parts

Planning and Costing: The Process of Making Multimedia – Scheduling -Estimating –
RFPs and Bid Proposals

Designing and Producing: Designing – Producing

UNIT V:

Content and Talent: Acquiring Content - Ownership of Content Created for a Project -
Acquiring Talent

The Internet and Multimedia: Internet History - Internetworking – Multimedia on the Web

Designing for the World Wide Web: Developing for the Web - Text for the Web -Images
for the Web - Sound for the Web - Animation for the Web - Video for the Web

Text Books:

1. Multimedia: Making It Work, Tay Vaughan, 8th Edition, Tara Mc-Graw Hill.

Reference Books:

1. Multimedia Systems, John F.Koegel Buford, Pearson edition, 2003
2. Ranjan Parekh, Principles of Multimedia, TMH, 2006.Engineering Evaluation Software
3. Multimedia: Computing, Communication and applications, Ralf Steinmetz and Klara Nahrstedt, Pearson Edition, 2001

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DESKTOP PUBLISHING TECHNOLOGIES (Elective)

UNIT I:

Basics of Desktop Publishing: what is DTP? – Letterpress Printing – Wooden Types and Metal Types, Hot Metal Types, Printing Photographs - Offset Printing- Gravure – Hardware requirements – Software Requirements – DTP Operator's Arsenal – TextEditors, word Processors, Vector Illustration Applications or drawing Applications, Bitmap Image Editing Application, Page Layout applications - Scanning –Printing –Monitor – briefly Input and Output Devices – Vector graphics and Raster graphics .

UNIT II:

Fonts – Font Styles, Serif and Sans Serif, Dimensions of font , Fixed pitch fonts and proportional spaced fonts, scaling tracking, kerning, leading and ligatures, fonts in your computer, vector fonts and bitmapped fonts - character level and Paragraph level formatting – Drop Caps – Hyphenations – Alignments –Indentation – Single side and Double Side Documents –Headers and Footers – Selecting the text and graphics – Graphic file formats – screen colors (RGB) and Printer colors (CMYK) –Spot colors and Process Colors – Color Separations – Colour Half-tone images - Generic Process of Desktop Publishing.

UNIT III:

Corel DRAW10: Starting CorelDRAW – Create , Save , close and open the drawing – Cartesian Coordinates – Creating tex file – Basic terms – Page and Pasteboard - standard tool bar – Handling Shapes using Property bar – Rotating objects – Lines and Arrows – Page and Document setup – Rulers, Guidelines and grid – Using Docker Windows – Using Text – Printing a Drawing - Arranging of Objects – Cliparts and Bitmaps – Fun with the Artistic Media tool - Colour plates.

UNIT – IV:

PhotoShop7: Introduction – Parts of Pageshop window - Open, Save, Close and Create a Image – Using Toolbox – Tool Options bar – Using layers – Layers paletter, adding new layer, Hiding layer, Renaming layer, Remove layer, Merge layer, copy and paste with image – Fascinating colors – Color models, Color Picker, Color palette, Swatches Palete, ICC – Inserting text in images – printing images – filters to improve images .

UNIT – V:

Page Maker7: Introduction of Page Maker- starting of Page Maker – Creating a new publication in Page Maker – Dialog Boxes Document and setup and Save Publication – Close the publication – Text Blocks- drawing a textBlock by Dragging the Mouse cursor, Empty Text block by a Mouse Click, Fitting text Blocks on a page, Inserting pages while placing Text – Handling Pages – Inserting, Deleting and goto the desired pages – using the Toolbox – Using the ToolBars – Importing text & Pictures – wrapping text around the pictures – Charater level formatting – Opening Multiple Publication windows – Using story editor- Using Styles – Pre-defined styles, new style – Using the Document Master Pages – Sample Publication.

Text Books:

1. Rapidex DTP Course by Shirish Chavan, Unicorn Books Pvt. Ltd., Edition 2005

Reference Books:

1. DeskTop Publishing English Edition By Ashish Joshi, Jigisha Raval, Pragnesh Patel, Computer world Publications,

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CLOUD COMPUTING (Elective)

UNIT I:

Introduction & Concepts: Introduction to cloud computing: introduction, characteristics of cloud computing, cloud models, cloud services examples, cloud-based services & applications.

Cloud Concepts & Technologies: Virtualization, Load Balancing, Scalability & Elasticity, Deployment, Replication, Monitoring, Software Defined Networking, Networking Function Virtualization, MapReduce, Identity And Access Management, Service Level Agreements, Billing.

UNIT II:

Cloud Services & Platforms: Compute Services, Storage Services, Database Services, Applications Services, Content Delivery Services, Analytics Services, Deployment & Management Services, Identity & Access Management Services, Open Source Private Cloud Software.

HADOOP & MAPREDUCE: Apache Hadoop, Hadoop MapReduce Job Execution, Hadoop Schedulers, Hadoop Cluster Setup

UNIT III:

Cloud Application Design: Introduction, Design Considerations for Cloud Applications, Reference Architecture for Cloud Applications, Cloud Application Design Methodologies, Data Storage Approaches.

UNIT IV:

Python Basics: Introduction, Installing Python, Python Data Types & Data Structures, Control flow, Functions, Modules, Packages, File Handling, Date/Time Operations, Classes

UNIT V:

Python for Cloud: Python for Amazon Web Services, Python for Google Cloud Platform, Python for Windows Azure, Python for MapReduce, Python Packages for Interest, Python Web Application Framework- Django, Designing a RESTful Web API.

Cloud Application Development in Python: Design Approaches, Image Processing App, Document Storage App, MapReduce App, Social Media Analytics App.

Text Books:

1. Cloud Computing A Hands On Approach By Arshdeep Bahga And Vijay Madisetti From University Press.