

**GIRRAJ GOVERNMENT COLLEGE (A), NIZAMABAD**  
**DEPARTMENT OF COMPUTERS APPLICATIONS**  
**Core 3:- DATABASE MANAGEMENT SYSTEM**  
**B.A.COMPUTERS II YEAR SEMISTER III Credits:-5**

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**CHOICE BASED CREDIT SYSTEM (With effect from 2017-18)**  
**SYLLABUS**

**Unit 1**

Introduction to Databases: Databases and Database Users, Introduction, Example, Characteristics of the Database Approach

Database System Concepts and Architecture: Data Models. Schemas, Three-Schema Architecture and Data Independence, Classification of Database Management Systems.

Data Models: Data Modelling and Data Models, the Importance of Data Models, Data Model Basic Building Blocks, Business Rules, the Evolution of Data Models, Degrees of Data Abstraction

**Unit II**

The Relational Database Model: Logical View of Data, Keys, Integrity Rules, Relational Set Operators Relationships within the Relational Database.

Entity Relationship (ER) Modelling: The Entity Relationship Model (ERM)- Entities , Attributes , Relationships,

Relationship Strength ,Weak Entities , Relationship Degree, Recursive Relationships, Associative (Composite) Entities; Developing an ER Diagram.

**Unit III**

ADVANCED DATA MODELING: The Extended Entity Relationship Model, Entity Clustering, Entity Integrity: Selecting Primary Keys.

Normalization: Normalization, The Need for Normalization, The Normalization Process, Surrogate Key Higher-Level Normal Forms, Normalization and Denormalization.

**Unit IV**

Introduction to Structured Query Language (SQL): Introduction to SQL, Data Definition Commands, Data Manipulation Commands, SELECT Queries, Advanced Data Definition Commands.

Advanced SQL: Relational Set Operators, SQL Join Operators, SQL Functions.

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Text Books:

1. Peter Rob and Carlos Coronel, Database Systems: Design, Implementation, and Management, Thomson, Eighth Edition, 2009
2. R. Elmasri, S. Navathe, Fundamentals of Database Systems, Pearson Education, sixth Edition, 2011

Book references:

1. MySQL : Reference Manual
2. Spoken Tutorial on "MySQL", as E-resource for Learning, <http://spoken-tutorial.org>



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**DEPARTMENT OF COMPUTERS APPLICATIONS**  
**Core 3 :- DATABASE MANAGEMENT SYSTEM**  
**B.A.COMPUTERS II YEAR SEMISTER III**

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**CHOICE BASED CREDIT SYSTEM (With effect from 2017-18)**

**Practical: Database Management System**

**NOTE:**

All the concepts of programs from Text Book including exercises must be practice, execute and write down in the practical record book.

Faculty must take care about UG standard programs it should be minimum 25 – 30.

In the external lab examination student has to execute at least three programs with compilation and deployment steps are necessary.

External Viva-voce is compulsory. Example programs:


1. Create a database having two tables with the specified fields, to computerize a library system of a Delhi University College.

**LibraryBooks (Accession number, Title, Author, Department, PurchaseDate, Price)**

**IssuedBooks (Accession number, Borrower)**

- a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
  - b) Delete the record of book titled "Database System Concepts".
  - c) Change the Department of the book titled "Discrete Maths" to "CS".
  - d) List all books that belong to "CS" department.
  - e) List all books that belong to "CS" department and are written by author "Navathe".
  - f) List all computer (Department="CS") that have been issued.
  - g) List all books which have a price less than 500 or purchased between "01/01/1999" and "01/01/2004".
2. Create a database having three tables to store the details of students of Computer Department in your college.

**Personal information about Student (College roll number, Name of**

  
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**student, Date of birth, Address, Marks(rounded off to whole number)  
in percentage at 10 + 2, Phone number)**

**Paper Details (Paper code, Name of the Paper)**

**Student's Academic and Attendance details (College roll  
number,**

**Paper code, Attendance, Marks in home examination).**

- a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
- b) Design a query that will return the records (from the second table) along with the name of student from the first table, related to students who have more than 75% attendance and more than 60% marks in paper 2.
- c) List all students who live in "Delhi" and have marks greater than 60 in paper 1.
- d) Find the total attendance and total marks obtained by each student.
- e) List the name of student who has got the highest marks in paper 2.

3. Create the following tables and answer the queries given below:

**Customer (CustID, email, Name, Phone, ReferrerID)**

**Bicycle (BicycleID, DatePurchased, Color, CustID, ModelNo)**

**BicycleModel (ModelNo, Manufacturer, Style)**

**Service (StartDate, BicycleID, EndDate)**


- a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
- b) List all the customers who have the bicycles manufactured by manufacturer "Honda".
- c) List the bicycles purchased by the customers who have been referred by customer "C1".
- d) List the manufacturer of red colored bicycles.
- e) List the models of the bicycles given for service.

4. Create the following tables, enter at least 5 records in each table and answer the queries given below.

**EMPLOYEE ( Person\_Name, Street, City )**

**WORKS ( Person\_Name, Company\_Name, Salary**

**) COMPANY ( Company\_Name, City )**

  
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**DEPARTMENT OF COMPUTERS APPLICATIONS**  
**Core 4 : INTERNET TECHNOLOGIES Credits:-5**  
**B.A.COMPUTERS II YEAR SEMISTER IV**

**CHOICE BASED CREDIT SYSTEM (With effect from 2017-18)**

**Unit - I**

**HTML**- Basic HTML, The document body, Text, Hyperlinks, Adding More Formatting Lists, Using Color and Images, Images, Tables, Frames, Forms. Cascading Stylesheets - Introduction, Inline Styles, Embedded Style Sheets, external sheets.

**Unit - II**

**JavaScript**- Introduction, simple programming, Obtaining User Input with prompt Dialogs, Operators (arithmetic, Decision making, assignment, logical, increment and decrement) Control Structures - if... else selection statement, while, do... while repetitions statement, for statement, switch statement, break and continue statements.

**Functions** - program modules in JavaScript, programmer defined functions, function definition, recursion.

**Unit - III**

**JavaScript**: Arrays, Objects - Math Object, String Object, Date Object, Boolean & Number Object, document and window Objects. Event Model - on click, on load, on error, onmouseover, onmouseout, on focus, on submit, on reset.

**Unit - IV**

Introduction, XML Basics, Structuring Data, XML Namespaces, Document Type Definitions (DTDs)

Text books:

1. Internet & World Wide Web- H. M. Deitel, P.J. Deitel, A. B. Goldberg-Third Edition

References:

1. D.R. Brooks, An Introduction to HTML and Javascript for Scientists and Engineers, Springer
2. URL: [www.wikipedia.org](http://www.wikipedia.org)
3. HTML A Beginner's Guide, Tata McGraw-Hill Education, 2009.
4. J. A. Ramalho, Learn Advanced HTML 4.0 with DHTML, BPB Publications, 2007

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**DEPARTMENT OF COMPUTERS APPLICATIONS**  
**BA COMPUTER II YEAR**  
**CHOICE BASED CREDIT SYSTEM (With effect from 2017-18)**  
Time: 30 min Internal Examination Max.Marks:-20

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Semester-I

**I. Multiple Choice Questions**

Marks: 10 x1=10

Note: i) Answer all the Questions.

ii) All question carry equal marks

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

**II .Fill in the blanks**

Marks: 10x1=10

Note: i) Answer all the Questions.

ii) All question carry equal marks

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

**Internal Examination**

Max.Marks:30

Exam Duration: 30

**I. Written Test**

20 marks

1. Multiple choice questions

10x1=10 marks

2. Filling the blanks

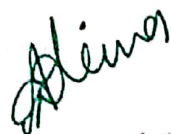
10x1=10 marks

**II Assignment:**

05 marks

**III Student Seminar**

05 marks



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**GIRRAJ GOVERNMENT COLLEGE (A), NIZAMABAD**  
**DEPARTMENT OF COMPUTERS APPLICATIONS**  
**SUBJECT: COMPUTER FUNDAMENTALS**  
**B.A.COMPUTERS I YEAR SEMISTER I**

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2016-17

**CHOICE BASED CREDIT SYSTEM (With effect from ~~2017-18~~)**  
**SYLLABUS**

**Unit - I**

Introduction to Computer : Introduction, Digital and Analog Computers, Characteristics of Computer, History of Computer, Generations of Computer, Classification of Computer, The Computer System, Application of Computers.

The Computer System Hardware: Introduction, Central Processing Unit, Memory Unit, Computer Cabinet

Computer Memory : Introduction, Memory Representation, Memory Hierarchy, CPU Registers, Cache Memory, Primary Memory, Secondary Memory, Access Types of Storage Devices, Magnetic Tape, Magnetic Disk, Optical Disk, Magneto-Optical Disk,

**Unit - II**

Input and Output Devices: Introduction, Input-Output Unit, Input Devices, Human Data Entry Devices, Source Data Entry Devices, Output Devices, I/O

Data Representation : Introduction, Number System, Conversion from Decimal to Binary, Octal, Hexadecimal, Conversion of Binary, Octal, Hexadecimal to Decimal , Conversion of Binary to Octal, Hexadecimal, Conversion of Octal, Hexadecimal to Binary, Binary Arithmetic, Signed and Unsigned Numbers, Binary Data Representation, Binary Coding Schemes, Logic Gates.

Interaction of User and Computer: Introduction, Types of Software, System Software, Application Software,.

**Unit - III**

Operating System : Introduction, Objectives of Operating System, Types of OS, Functions of OS, Process Management, Memory Management, File Management, Device Management, Protection and Security, User Interface, Examples of Operating Systems.  
The internet basics.

*Alina*

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## Unit IV

Information Systems : Introduction, Data, Information and Knowledge, Characteristics of Information, Information System (IS), Computer-Based

Information System (CBIS), Need for Efficient Information System, Categories of Information System, Operations Support System, Management Support System,

Specialized Information System, Careers in Information Systems.

### Books:

1. A. Goel, Computer Fundamentals, Pearson Education, 2010.
2. Reema Thareja, Fundamentals of Computers, Oxford 2015.

### References:

1. Spoken Tutorial on "Linux (Ubuntu), LibreOffice (Writer, Calc, Impress), Firefox", as E-resource for Learning. <http://spoken-tutorial.org>

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