B.C.A. Semester – I
BCA-102 : Database Management System

Teaching Scheme (Per week)		Teaching Scheme (Per semester)		Examination Scheme					
				INT		EXT		TOTAL	
Th. (hours)	Pr. (hours)	Total Hours	Credit	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)
4	--	40	4	30	--	70	--	100	--

Unit - I [18 Marks]
Database Concepts:
Database and DBMS, Comparison between traditional file V/s DBMS, Characteristics of data in database, Components of database system environment, Functions of DBMS, Advantages and disadvantages of the DBMS, DBMS users, Database administrator, Role of DBA

Unit – II
Database Design and Architecture [17 Marks]
Essentials of Database Design, Three level Architecture of Database- external, conceptual and internal, Data Models concepts: Hierarchical, Network and Relational, Operators, relations, domains and attributes, keys, traditional set operations, special relational operations.

Unit - III [18 Marks]
The E/R model
Entity, E-R Diagram, Attributes, Relationship & Types, Development stages of E-R diagram & Examples
Normalization
Normalization Process, 1st NF , 2nd NF, 3rd NF, demoralization.

Unit - IV
MS-Access [17 Marks]
Introduction of Database,
Data type - Text, Number, Auto number, Currency, Boolean, Date/Time, Memo
Object – Table, Query, Forms, Reports
Controls use in form and report

Books:
1. Database Management System   A C Shah & A R Patel, MacMillan Publication
2. Introduction to Database System   C. J. Date (7th edition) Low Price Edition
3. Database system concepts   Henry F. Korth (3rd edition) TMH Publications

Question Paper Scheme:

University Examination Duration : 3 Hours.

Q.1 - Unit-I   (18 Marks)
    A. Objective/ Short Questions.
    B. Descriptive/ Long questions.
 Q.2 - Unit-II   (17 Marks)
    A. Objective/ Short Questions.
    B. Descriptive/ Long questions.
Q.3 - Unit-III   (18 Marks)
    A. Objective/ Short Questions.
    B. Descriptive/ Long questions.
Q.4 - Unit-IV   (17 Marks)
    A. Objective/ Short Questions.
    B. Descriptive/ Long questions.

Note: All Objective/ Short Questions are compulsory, no option will be given.