

**Add on Diploma Course in Computer Application (Data Care Management)  
Part II Semester-III**

**2018-19, 2019-20 and 2020-21 Sessions**

**PAPER A: Database Management System and MS Access**

**External Marks: 45**

**Minimum Pass Marks: 35%**

**Internal Assessment: 15**

**Maximum Time: 3 Hrs.**

**Lectures to be delivered: 45-55 Periods**

**A) Instructions for paper-setter**

The question paper will consist of three sections A, B & C. Sections A & B will have four questions from the respective sections of the syllabus and will carry 40% marks each. Section C will have 6-12 short answer type questions which will cover the entire syllabus uniformly and will carry 20% marks in all.

**B) Instructions for candidates**

Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.

**SECTION-A**

**Traditional file procession system:** Characteristics, limitation. Database: Definition, composition, **Database Management System:** Definition, Characteristic advantages over traditional file processing system, Implication Database approach, Uses of database, DBA and its responsibilities Database schema, instance.DBMS architecture, data independence, mapping between different levels.

**Database language:** DDL, DML, DCL, Database utilities, Data Models, Keys : Super, candidate, primary, unique and foreign key

**SECTION-B**

**Entity relationship model:** concepts, mapping cardinalities, entity relationship diagram, weak sets, strong entity sets, aggregation, generalization, converting ER diagram to tables.

**Relational Algebra:** Basic operations, additional operations.

**MS-Access :** Introduction to MS-Access, working with database and tables, queries in Access, Applying integrity constraints, Introduction to forms, sorting and filtering controls, Reports and Macro : Creating reports using Macros.

**Text Books:**

- 1 Elmsiry Nawathy, Introduction to Database Systems, Pearson Education India
- 2 Content Development Group" Working with MS-OFFICE 2000, TMH

**Reference Books:**

1. Henry F. Abraham, Database System Concepts, Tata Mcgraw Hill.
2. Naveen Prakash, Introduction to Database Management, TMH.
3. C.J. Date, An Introduction to Database Systems, Pearson Education India

**PAPER B: Software Lab Based on Paper A**

Max. Marks: 40

Max. Time: 3 Hrs

Min. Pass Marks: 35%

Lectures to be Delivered: 60-65 Hrs

This laboratory course will comprise of exercises to supplement what is learnt under Paper A: Database Management Systems.

The breakup of marks for the practical will be as under:

Lab Record	:	05 Marks
Viva Voce	:	10 Marks
Program Development and Execution	:	25 Marks

**Add on Diploma Course in Computer Applications (Data Care Management)  
Part II Semester-IV**

**2018-19, 2019-20 and 2020-21 Sessions**

**PAPER A: Advance Database Management Systems and PL/SQL**

**External Marks: 45**

**Maximum Time: 3 Hrs.**

**Minimum Pass Marks: 35%**

**Lectures to be delivered: 45-55 Periods**

**Internal Assessment: 15**

**A) Instructions for paper-setter**

The question paper will consist of three sections A, B & C. Sections A & B will have four questions from the respective sections of the syllabus and will carry 40% marks each. Section C will have 6-12 short answer type questions which will cover the entire syllabus uniformly and will carry 20% marks in all.

**B) Instructions for candidates**

Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.

**SECTION-A**

**Database design:** Functional dependency, decomposition, problem arising out of bad database design, normalization, multivalued dependency. Database design process, database protection, database integrity, database concurrency: Problems arising out of concurrency, methods of handling concurrency. Data recovery, database security: Authentication, authorization, methods of implementing security.

**SECTION-B**

**SQL:** Basic SQL Select Statements. Table Creation and Management: Create, Alter, Drop and Rename. Constraints: Primary key, Foreign key, Unique, Not null and Check. Data Manipulation: Insert, Update and Delete. Restricting rows in Select using Where clause, Comparison operators, Logical Operators, Order by clause.

**PL/SQL:** Introduction to PL/SQL, Block Structure, Data Types, Creation of Variable, Scope, Nested Blocks, Control Structures. Records and Collections. Using SQL with PL/SQL: Cursors and its types. Subprograms: Stored and Local Procedures and Functions, Procedure versus Function, database triggers.

**Text Books:**

1. Elmasry Navathe, Introduction to Database Systems, Pearson Education India
2. Content Development Group, Working with MS-OFFICE 2000, TMH

**Reference Books:**

1. Henry F. Abraham, Database System Concepts, Tata Mcgraw Hill.
2. Naveen Prakash, Introduction to Database Management, TMH.
3. C.J. Date, An Introduction to Database Systems, Pearson Education India

**PAPER B: Software Lab Based on Paper A**

Max. Marks: 40

Max. Time: 3 Hrs

Min. Pass Marks: 35%

Lectures to be Delivered: 60-65 Hrs

This laboratory course will comprise of exercises to supplement what is learnt under Paper A: Advance Database Management Systems.

The breakup of marks for the practical will be as under:

Lab Record	:	05 Marks
Viva Voce	:	10 Marks
Program Development and Execution	:	25 Marks