

Roll No.

Total Pages : 03

Unit I

PMCA/M-23

24628

DATABASE MANAGEMENT SYSTEM

CSDE-14

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question each from Unit I to Unit IV. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) What do you mean by database schema and database instance ?
  - (b) Briefly describe the role of data manager and file manager.
  - (c) Differentiate between primary key and unique key.
  - (d) What are relationship constraints ? Discuss.
  - (e) What are views ? How are views created ?
  - (f) How do you implement primary and foreign key constraint in SQL ?
  - (g) How can you build a relationship between the different databases in Access ?
  - (h) What joins are and how you can open the database in Access ?
- 8×2=16

2. (a) Distinguish between data, information, knowledge. 6
- (b) Define Database Management System (DBMS). What are its important properties ? Discuss the advantages of DBMS over file processing system. 10
3. (a) How three-tier architecture of DBMS helps in achieving data independence ? Explain. 8
- (b) What are the important functions of DBMS ? Describe DBMS interfaces. 8

Unit II

4. (a) Define - strong entity, recursive relationship, multivalued attribute, simple attribute, integrity constraints. 8
- (b) Outline symbolic notations used to draw ER diagrams. How are ER diagrams mapped to relational tables ? 8
5. (a) Outline an ER diagram of payroll system. 8
- (b) What are data models ? Differentiate between hierarchical and network data model. 8

Unit III

6. (a) What is the need of relational algebra ? Discuss set-oriented operations with specimen examples. 8

- (b) What are the data types used in SQL ? Write the purpose, syntax and example for the following SQL statements : **8**
- (i) Alter
  - (ii) Update
  - (iii) Delete.
7. (a) What is functional dependencies ? Differentiate between full and partial functional dependency. **6**
- (b) What is Normalization ? Discuss the similarities between 3NF and BCNF. How is BCNF considered to be stronger than 3NF ? **10**

#### Unit IV

8. (a) What are the data types used in MS-Access ? Discuss the parts of an Access window. **8**
- (b) Explain, how you can create a form in Microsoft Access. **8**
9. (a) How do you create a new database in MS-Access ? Discuss the steps. **8**
- (b) Describe your documentation process when creating reports in MS-Access. **8**