DATABASE MANAGEMENT SYSEM – B

Time Allowed : 3Hrs. **Maximum Marks : 70**

Note : Attempt ONE question each from Sections A, B, C and D carrying 14 marks each. Section E is compulsory consisting of 7 short answer type questions carrying 2 marks each.

(SECTION–A)

1. Define Database Management System. What are the advantages of using database approach ? Explain. (14)
2. (a) Discuss in detail the three scheme architecture of database. (7)
   (b) Define and distinguish between Physical and Logical data independence. (7)

(SECTION–B)

3. Discuss in detail the ER model. (14)
4. What are the different types of keys in database ? Explain. (14)

(SECTION–C)

5. Consider the following relations and write the relational algebraic expression for the given queries :

Class	:	Class Code	Class Name	Class Teacher	
Student	:	Roll No.	Name	Class Code	
Teacher	;	Teacher No.	Name	Qualification	Area of Interest
Subject	:	Subject Code	Subject Name	Class Code	Teacher

Queries :

(a) Find the class teacher of class of student whose rollnum is 1001.
(b) Find the areas of interest of teachers who teach class 'BSc'.
(c) Find subjects which teacher named 'James' teaches.
(d) Find rollnums and Names of students to whom teacher named 'SMD' teaches. (14)

6. (a) What are the problems of bad database design ? Explain. (7)
   (b) Discuss in detail the different types of dependencies. (7)

(SECTION–D)

7. How integrity constraints are implemented in MS Access ? Explain giving example. (14)
8. How forms and reports are created in MS Access ? Explain. (14)

(SECTION–E)

9. Write short answers of the following :

(a)	Distinguish between Schema and Instance.	(2)
(b)	Distinguish between strong and weak entity sets.	(2)
(c)	Distinguish between generalization and specialization.	(2)
(d)	Define referential integrity constraint.	(2)
(e)	Define BCNF.	(2)
(f)	How entity integrity constraint is applied in MS Access ?	(2)
(g)	Distinguish between sorting and filtering.	(2)