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श्री जैन (पी.जी.) कॉलेज, बीकानेर

BPP-1092

M.Sc. (Previous) Examination, 2022

COMPUTER SCIENCE

MCS - 103

(Database Management)

Time : 3 Hours]

[Maximum Marks : 50

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **3** marks.

Section-C

(Marks : 5 × 3 = 15)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **5** marks.

Section-A

1. (i) What is Cross Product ?
- (ii) Difference between Schema and Instances.
- (iii) What is Referential Integrity ?

- (iv) What do you mean by Stored Procedures ?
- (v) What is Functional Dependency ?
- (vi) What is Starvation ?
- (vii) What is Dense Index ?
- (viii) What do you mean by Foreign Key ?
- (ix) What is Data Warehouse ?
- (x) What is BCNF ?

Section-B

2. Explain Data Independency.

Or

Explain the role of a DBA in a database environment.

3. Write short notes on the following :

- (a) Inner join
- (b) Left join
- (c) Right join
- (d) Full join

Or

Write short notes on the following :

- (a) Conceptual Schema
- (b) Intersection
- (c) Super key
- (d) Minus

4. Solve the following on the given database (using SQL) :

→ Create Database org;

→ Create a table worker

(Worker_ID, First name, Salary, Department)

→ Insert any *five* record.

→ Write an SQL query to find the position of the alphabet ('a') in the First name column 'Arun' from worker table.

Or

What is Procedure ? How can we create and call procedure ?

5. Explain Normalization.

Or

What is Transaction Processing ?

6. Explain Database Recovery Technique.

Or

What is Concurrency Control ? Explain it.

Section-C

7. Explain the types of Data Model.

8. What is Key ? Types of key explain with example.

9. Explain Cursors and Trigger with example.

10. Explain serial and non-serial schedules.

11. Explain time stamp ordering algorithm.