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 ?

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(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.