

2023

INFORMATION TECHNOLOGY

Paper : INT-VE-6026

(Database Design and Programming)

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Answer the following as directed : 1×7=7
- (a) In a DBMS, DDL means _____.
(Fill in the blank)
 - (b) BCNF stands for _____.
(Fill in the blank)
 - (c) What do you mean by database programming?
 - (d) Why is rollback used in DBMS?
 - (e) What is composite attribute?
 - (f) Define tuple.
 - (g) What is ASP?

(2)

2. Answer any *four* of the following questions :

2×4=8

- (a) Explain data independence in DBMS schema architecture.
- (b) Write about concurrency control in DBMS.
- (c) Differentiate between join and Cartesian product.
- (d) Give an example of derived attribute.
- (e) Write about data types in DBMS.
- (f) What are strong and weak entities?

3. Answer any *three* of the following questions :

5×3=15

- (a) Describe DBMS architecture.
- (b) Write about various keys in DBMS.
- (c) Explain RDBMS. Write about distributed database system.
- (d) Write about advantage and disadvantage of No-SQL database.
- (e) What do you mean by database programming? Describe the role of DBMS along with its advantages.

(3)

4. Answer any *three* of the following questions :

10×3=30

(a) What is SQL? Describe various languages present in DBMS. Explain different normal forms with examples.

(b) Consider the following table :

ID	Name	Department	Salary
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(i) Write SQL to create the above table.

(ii) Write SQL to display data of employees whose salary is in between 10000 and 20000.

(iii) Write SQL to display the name of employees whose name starts with 'A'.

(iv) Write SQL to insert data into table.

(c) Write short notes on the following :

(i) ACID properties

(ii) Integrity rules in DBMS

(d) Design an HTML for entry RollNo, Name, PhnNo. Write PHP programme to communicate with server.

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