

Roll No.

Total No. of Questions : 07]

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BCA (Sem. - 4th)

DATABASE MANAGEMENT SYSTEM

SUBJECT CODE : BC-402

Paper ID : [B0216]

[Note: Please fill subject code and paper ID on OMR]

Time : 03 Hours

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Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

(10 × 2 = 20)

Q1)

- a) Define Database system.
- b) What is an attribute and tuple? Explain with an example.
- c) Define Data independence.
- d) What is ER diagram? Explain with an example.
- e) What is SQL? Explain.
- f) What is join? Explain its types.
- g) What is meant by log based recovery?
- h) What are integrity constraints? Explain.
- i) What are weak entities? How are they different from strong entities.
- j) Who is DBA? Explain his role in database management.

Section - B

(4 × 10 = 40)

- Q2)** What is DBMS? Explain three level architecture with diagram.
- Q3)** What are data models? Compare and contrast hierarchical, network and relational data models.
- Q4)** What is relational algebra? How it is different from relational calculus?
- Q5)** What is normalization? What are its objectives? Explain various normal forms?
- Q6)** What are various threats to data security? Explain how you will protect them.
- Q7)** What is distributed database? Explain its architecture.

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