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BCA (Sem. - 4<sup>th</sup>)

**DATA BASE MANAGEMENT SYSTEM**

**SUBJECT CODE : BC - 402 (N2)**

**Paper ID : [B0216]**

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

**Time : 03 Hours**

**Maximum Marks : 60**

**Instruction to Candidates:**

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

**Section - A**

**Q1)**

**(10 × 2 = 20)**

- a) What is logical data independence?
- b) What is the difference between data and information?
- c) What is foreign key?
- d) What is the difference between partial participation and total participation?
- e) What are the disadvantages of network model?
- f) What are the advantages of shadow paging recovery technique?
- g) Describe entity integrity constraints.
- h) What is DIVISION operator?
- i) What are accidental security threats?
- j) Describe the function of log file in database.

**Section - B**

**(4 × 10 = 40)**

- Q2)** What is database administrator? Explain in detail the responsibilities of DBA.
- Q3)** What are the functions of DBMS? Explain three level architecture of database.
- Q4)** What is conceptual model? Describe sign conventions of E-R model with example.
- Q5)** What is relational algebra? Explain different set theoretic operations in algebra.
- Q6)** What is need of concurrency control? Explain different concurrency control techniques.
- Q7)** What are the advantages of distributed systems? Explain their structure.

