

Roll No. ....

Total No. of Questions : 13]

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**J-3597[S-1453]**

**[2037]**

**BCA (Semester - 4<sup>th</sup>)**

**DATABASE MANAGEMENT SYSTEM (BCA - 402)**

**Time : 03 Hours**

**Maximum Marks : 75**

**Instruction to Candidates:**

- 1) Section - A is **compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

**Section - A**

**Q1)**

**(15 × 2 = 30)**

- a) What is difference between data and information?
- b) What are data views?
- c) What do you mean by data redundancy?
- d) What is data independence?
- e) What are single-valued and multivalued attributes?
- f) What is a binary relationship set?
- g) What is a tuple variable?
- h) What is a query language?
- i) What do you mean by database schema?
- j) Define the term data manipulation language.
- k) What are stored procedures?
- l) What do you mean by the term deadlock?
- m) What are graphical user interfaces?
- n) What do understand by a distributed database?
- o) What is data replication?

**P.T.O.**

## Section - B

(9 × 5 = 45)

- Q2)** Describe major advantages and disadvantages of a database system.
- Q3)** Explain the difference between physical and logical data independence.
- Q4)** List major steps that you would take in setting up a database for a particular enterprise.
- Q5)** Define the concept of aggregation. Give two examples of where this concept is useful.
- Q6)** Explain the distinctions among the terms primary key, candidate key and superkey.
- Q7)** Explain the difference between a weak and a strong entity.
- Q8)** Describe the differences in meaning between the terms relation and relation schema with the help of suitable examples.
- Q9)** Discuss the basic operations that can be performed using relational algebra.
- Q10)** Discuss various set operations that can be performed in SQL.
- Q11)** Draw an ER diagram for a hospital management system, make suitable assumptions.
- Q12)** Discuss the advantages of distributed databases.
- Q13)** Compare the shadow-paging recovery scheme with log-based recovery schemes.

