

# PC-4703/MK

**Q-1/2051**

FUNDAMENTALS OF DBMS–122  
(Semester–II)

Time : Three Hours]

[Maximum Marks : 60

**Note :** Attempt *two* questions each from Section A and B carrying 9 marks each. Section C is compulsory consisting of 12 short answer type questions carrying 2 marks each.

## SECTION – A

- I. Give three level architecture of Database Management System.
- II. How an E-R diagram is modelled into a physical database?
- III. Give the importance of DDL and DML.
- IV. Compare relational, hierarchical and network model.

## SECTION – B

- V. What are the advantages of a strict-two-phase locking protocol?

- VI. What are functional dependencies? How they differ from multi-valued dependencies?
- VII. Write a note on database security and integrity.
- VIII. What are the merits and demerits of normalization?

## **SECTION – C**

### **(Compulsory Question)**

- IX. (a) What is meant by data independence?
- (b) Differentiate between primary and unique key.
- (c) Explain the concept of aggregation.
- (d) What is meant by cardinality of a relation?
- (e) What is a sub schema?
- (f) Define term "Serializability".
- (g) What is authentication?
- (h) What are different privileges?
- (i) What is the role of database administrator?
- (j) Define view.
- (k) Define instance.
- (l) What are ACID properties?