

Total No. of Questions : 10]

SEAT No. :

P3000

[Total No. of Pages : 2

[5669]-592

T.E. (Information Technology)
DATABASE MANAGEMENT SYSTEM
(2015 Pattern) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8 and Q9 or Q10.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary.

Q1) a) Describe the three level architecture of DBMS. Explain how is it useful for achieving data independence [5]

b) List out different Data Models. Explain any two. [5]

OR

Q2) a) Explain insertion, deletion & modification anomalies with example. [5]

c) Explain the concept of view along with its operations. [5]

Q3) a) Explain embedded & dynamic SQL. [5]

b) What is trigger? Explain trigger with suitable example. [5]

OR

Q4) a) Explain join operations with example. [6]

b) Explain the types of attributes with example. [4]

Q5) a) Explain deadlock detection and prevention techniques. [6]

b) Explain log-based recovery techniques. [6]

c) Explain two phase locking protocol and its forms. [6]

OR

P.T.O.

- Q6)** a) Draw and explain all parallel database architectures. [9]
b) Explain types of fragmentation and replication with example. [9]
- Q7)** a) Explain advantages of NOSQL over SQL. Also explain CURD operations in NOSQL. [8]
b) Write a short note on (any two) : [8]
i) Cloud database
ii) SQLite database
iii) Mobile database

OR

- Q8)** a) Describe key points in JSON along with its data types. Compare JSON with XML. [8]
b) Draw and explain architecture of HDFS. [8]
- Q9)** a) Explain various data processing techniques. [8]
b) Explain different schema in Data Warehouse. [8]

OR

- Q10)** a) Write a short note on : [8]
i) Machine Learning for Business Intelligence
ii) KDD process
b) Explain characteristics and applications of Big data. [8]
