

Total No. of Questions : 12]

SEAT No. :

**P795**

[Total No. of Pages : 3

**[4659] - 207**

**B.E. (Information Technology) (Semester - I)**

**A : ADVANCED DATABASE MANAGEMENT (Elective - I)  
(2008 Pattern)**

*Time : 3 Hours]*

*[Max. Marks : 100*

*Instructions to the candidates:-*

- 1) *Answer Question 1 or 2, 3 or 4, 5 or 6 from section - I and Question 7 or 8, 9 or 10, 11 or 12 from section - II.*
- 2) *Answers to the two sections should be written in separate answer books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right indicate full marks.*
- 5) *Assume suitable data, if necessary.*

**SECTION - I**

- Q1)** a) What is cursor? Explain with diagram the different types of cursor. [8]  
b) Explain the PL/SQL Block structure in detail. [8]

OR

- Q2)** a) What is trigger? Write the trigger for updating the records in the database. [8]  
b) Explain Embedded SQL & dynamic SQL. [8]
- Q3)** a) Explain the architecture of transaction processing monitor. [8]  
b) Explain Two phase Locking with example. [10]

OR

- Q4)** a) Explain ACID properties. [4]  
b) Explain Real - Time Transaction systems. [4]  
c) What are the different types of concurrency control? Explain any one type in detail. [10]

**P.T.O.**

- Q5) a)** Discuss the table inheritance in SQL. **[4]**
- b) Consider the database schema with a relation University whose attributes are as shown below: **[12]**
- with types specified for multivalued attributes
- staff (sname, Department Set multiset (Department), subject set multiset (subjects)).
- Department = (name, joining date)
- Subjects = (type, examset set of (Exams))
- Exams = (year, place)
- i) Define the above schema in SQL : 2003 with appropriate types for each attribute
- ii) Using database schema in SQL 2003, write the following queries:
- \* Find name of all staff who have joined after January 2013.
  - \* List all subjects in the relation University.

OR

- Q6) a)** Explain the document type definition. Describe a DTD with suitable example for an XML. **[8]**
- b) Write the applications of XML. **[4]**
- c) Differentiate object oriented (OO) verses object Relational (OR) databases. **[4]**

### SECTION - II

- Q7) a)** Explain in detail the data ware house architecture. **[8]**
- b) Write short notes on following:- **[10]**
- i) Online Transaction processing
  - ii) Data warehouse data House
  - iii) Dimentionality modeling in datawarehouse
  - iv) Data warehouse using oracle.
  - v) Data Marts.

OR

- Q8)** a) Explain the functions of Administration & management tools in data warehouse. [10]
- b) Explain the approaches taken by vendor to provide data extraction, cleansing & data transformation tools. [8]
- Q9)** a) Write the algorithm of K - mean data mining. [8]
- b) Describe the characteristics of multi - dimensional data & how this data can be represented? [8]

OR

- Q10)** a) Write short notes on following:- [8]
- i) OLAP Benchmarks
- ii) Applications and Benefits of OLAP
- iii) Basian classifier
- iv) Predictive modeling
- b) Discuss OLAP functionality provided by ROLLUP & CUBE of SQL standard. [8]
- Q11)** a) Write the types of locks. [4]
- b) Explain exceptional handlers in oracle. [4]
- c) Explain implicit & explicit locking in oracle. [8]

OR

- Q12)** a) Write notes on database security & threats. [8]
- b) Explain the authorization and access control for providing security for database. [8]

