Total No. of Questions : 12]

SEAT No. :

P795

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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) Differenciate 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]**