

Total No. of Questions : 12]

Nov-Dec-2012

SEAT No. :

P1207

[4264]-714

[Total No. of Pages : 3

B.E. (IT)

**ADVANCED DATABASE MANAGEMENT
(2008 Pattern) (Elective - I) (Semester - I)**

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer any three questions from each section.
- 2) Answers to the two sections should be written in separate books.
- 3) Figures to the right indicate full marks.
- 4) Neat diagrams must be drawn wherever necessary.
- 5) Assume suitable data, if necessary.

SECTION - I

- Q1)** a) Write a static embedded SQL code (Pro*C) to insert a record into PRODUCT table having following structure : (do not create table)
Product_id integer, product_type_code varchar2, supplier_id integer,
product_name varchar2, product_price number, other_product_details
varchar2.

You need to do the following :

[9]

- i) Connect to database,
 - ii) Insert the record and
 - iii) Trap exception if any
- b) Explain any four cursor attributes. Explain the usage of %TYPE and %ROWTYPE. You may explain it with the help of code fragments. [9]

OR

- Q2)** a) What do you mean by SQLCA? How do you declare SQLCA and use different sqlca. sqlcode values in embedded SQL programs? [9]
- b) Write a function to get lab marks from student marks for a given roll no and subject name. Trap exceptions, if any. [9]

- Q3)** a) With diagram explain the detailed structure of TP monitors. [8]
- b) Explain main - memory databases. [8]

OR

- Q4)** a) Explain long duration transaction systems. [8]
- b) Explain shared locks and exclusive locks. [8]

- Q5)** a) Which limitations of RDBMSes are removed by OO databases? [8]
- b) Explain the structure of XML with one example. [8]

P.T.O.

OR

- Q6) a) Write a note on persistent programming languages. [8]
b) Explain the query transformation techniques in XML. [8]

SECTION - II

- Q7) Draw a neat diagram of typical architecture of data warehouse. State four clauses in Data Warehouse definition. Explain how architecture supports them. Explain metadata and the need for detailed data, lightly summarized data and highly summarized data. [18]

OR

- Q8) Suppose that XYZ Engineering University wants to build data warehouse that consists of four dimensions time, college, year and branch and the two measures 'appeared count' and 'highest total marks' in each year where year is FE, SE, TE and BE. [18]

- a) Enumerate three classes of schemas that are popularly used for modeling data warehouse. Explain them. Do they store normalized data?
b) Draw a schema diagram for the above data warehouse using one of the schemas listed above. Show facts clearly.

- Q9) a) Define support and confidence. Apply apriori association rule mining algorithm for the following data and find out frequent itemsets. Consider support = 2 i.e. 50%. [8]

TID	Items
10	a,c,d
20	b,c,e
30	a,b,c,e
40	b,e

- b) Differentiate between OLTP and OLAP. [8]

OR

- Q10) a) What is roll - up, drill down, slicing and dicing? What is ROLAP and MOLAP? [8]

- b) Explain classification and clustering. Explain how they are different. [8]

Q11) a) Explain the meaning of cascading authorizations. Suppose a person Y grants access to person A (with grant option) to resource A at $t = 20$. Person Z grants access (with grant option) to person A again to the same resource at $t = 50$, Person A grants access to person B at $t = 30$ and to person C at $t = 60$. If later Y revokes A's access to resource R, comment about the status of B's and C's access. State reasons. Draw required diagram. [8]

b) Write a note on statistical databases. [8]

OR

Q12) a) Explain GRANT and REVOKE. What is GRANT with GRANT OPTION? [8]

b) Write a note on tracker attacks. [8]

