23075

M. Tech. 3rd Sem. (Computer Engg.)

Examination – January, 2016

ADVANCED DBMS

Paper : MTCE – 703 – A

Time : Three Hours]   [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions in all. All questions carry equal marks.

1. (a) What are the various operational in relational algebra ? Explain with example.

   (b) Explain the three-level architecture of DBMS.

2. (a) Describe the structure of typical query processor with the help of a block diagram.

   (b) How a query processor evaluate one-variable and two variable expression in a query. Describe some method for each.

3. (a) What are the possible state and ACID property of a transaction ? Explain.

(b) What is shadow paging ? How is it different from log-based recovery techniques ? Explain.

4. (a) What is concurrency control ? Describe optimistic concurrency control techniques.

(b) What do you mean by deadlock ? Explain deadlock prevention, avoidance and detection.

5. (a) What is data warehouse ? Describe the various characteristics of data warehouse.

(b) Explain the concept of star, snowflake and fact cancelation schema with example.

6. (a) What do you mean by DDBMS ? What are the advantages and disadvantages of DDBMS ?

(b) Explain data fragmentation and data replication.

7. (a) Discuss how database object can be created and queried in object oriented database system.

(b) Describe the basic concept of an object oriented database system. How they are different from conventional database system ?

8. (a) What is object relational database ? Describe the advantage of object relational approach.

(b) Explain various feature of enhanced SQL of object relational database with the help of example.

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