00091

(ADIT) / (BIT) PROGRAMME

Term-End Examination

December, 2011

CST-302 : ADVANCED DATABASE MANAGEMENT

Time : 3 hours   *Maximum Marks : 75*

Note :   *This paper consists of **two** sections. All questions are compulsory in **Section-A**. There are three questions in **Section-B**. Attempt any two questions from **Section-B**.*

SECTION - A

Each of the following *10* objective type questions each carry *1* marks.   **10x1=10**

1. Object oriented database allows :
    (a) inclusion of more code in the database itself
    (b) removal of data redundancy from a table
    (c) persistence of objects in a file which have indexed sequential organisation
    (d) All of the above

2. Which of the following task is performed at the server in a client - server database system
    (a) Access control
    (b) Data protection
    (c) Data privacy control
    (d) All of the above

3. Knowledge in a knowledge database may take the form of
   (a) Date　　　　(b) information
   (c) heuristic　　(d) all of the above

4. In Mobile database the key challenges is :
   (a) Authentication
   (b) Authorisation
   (c) Routing and query processing
   (d) Query decomposition

5. Which is one of the key requirement on a Web Database System ?
   (a) Authentication
   (b) Data Security
   (c) Data Access Control
   (d) Query processing

6. A "Result Set" in JDBC can hold :
   (a) A query data
   (b) a query result
   (c) A table
   (d) types of an operation

7. A data warehouse has :
   (a) Inconsistent data
   (b) Redundant data
   (c) No missing data
   (d) Error prone data

8. Data mining is same as :
   (a) Advanced Query processing
   (b) Advanced operation manager
   (c) Query optimiser
   (d) None of the above

9. OLAP is defined as :
   (a) Online Analytical Processing
   (b) Online Advanced Process
   (c) Online Additional Project
   (d) Online logical Advanced Processing

10. A distributed database nodes for better communication, should be connected by _____ network topology.
    (a) Tree   (b) Star
    (c) Mesh   (d) Ring

11. (a) What is Data Replication and fragmentation in a distributed database system ? Explain with the help of example(s). 8

    (b) What are the requirements of a Web database system ? What is JDBC ? How do you use it ? Explain with the help of an example. 8

    (c) What is data mining ? How is it related or different to knowledge management ? How is data mining useful for an organisation ? What are the different patterns that can be found by data mining ? What technological infrastructure is required for data mining ? 9

SECTION - B

12. What is a data warehouse ? How is it different **20** from operational databases ? What are various issues relating to data warehouse ? Explain an application that would require the development of a data warehouse. Explain the process of developing a data warehouse.

13. (a) What is mobile database ? Explain the issues **10** related to the development of a mobile database system.

    (b) What is a knowledge database system ? **10** How is it different to database system ? Explain any one knowledge representation scheme with the help of an example.

14. (a) What is an object oriented database **10** system ? What are their advantages and weaknesses ? How are they different than that of relational database systems ? Explain with the help of an example.

    (b) Explain the following with the help of **10** example/diagram, if needed :
        (i) Tools for web database
        (ii) Data warehouse architecture
        (iii) Differences between JDBC and ODBC
        (iv) Roles of a server in a client-server system.