14/05/19

Roll No. | | | | | | | | | | |

B.E. / B.TECH. (FULL TIME) END SEMESTER EXAMINATIONS APRIL/MAY 2019

INFORMATION TECHNOLOGY

VI Semester

IT8001 – ADVANCED DATABASE TECHNOLOGY

(Regulation 2012)

Time: 3 Hours | Answer ALL Questions | Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. Brief the various methods of communication from a client system to a query server.
2. Differentiate between Parallel and Distributed Database.
3. What are type constructors? Give examples.
4. List the any two basic operations each for the following built-in interfaces of the ODMG Object Model: collection, iterator.
5. What are path expressions? Give example.
6. State any two differences between XML Schema and XML DTD?
7. What is mobile controlled handoff?
8. Give two examples each for location dependent and independent data.
9. Mention the significance of TF and IDF metrics in text databases.
10. Define trigger in active databases. And list the three components of a trigger.

Part – B (5 x 16 = 80 marks)
(Question No.11 is Compulsory)

11. (i) Brief the types of handoff with respect to network and link transfer. (8)
(ii) Explain the steps involved in handoff process with reference to link transfer (8)

12. a) (i) Define Fragmentation? What are the various types of fragmentation and also state the rules of fragmentation? (8)
(ii) Explain Data Allocation in distributed database design? What typical units of data are distributed over sites? (8)

(OR)

b) (i) Explain Inter Query Parallelism and Intra Query Parallelism with suitable examples? (16)

13. a) Discuss about the various object relational features in SQL with sample queries. (16)

(OR)

b) Describe the architecture of OODBMS and also explain the various approaches to OODBMS. (16)

14. a) Specify the following views as queries in X Query on the COMPANY XML schema

(i) A view that has the department name, manager name, and manager salary for every department. (4)

(ii) A view that has the employee name, supervisor name, and employee salary for each employee who works in the Research department. (4)

(iii) A view that has the project name, controlling department name, number of employees, and total hours worked per week on the project for each project. (4)

(iv) A view that has the project name, controlling department name, number of employees, and total hours worked per week on the project for each project with more than one employee working on it. (4)

(OR)

b) Explain the various steps in Knowledge discovery in databases and also brief various data mining functionalities with suitable examples. (16)

15. a) Discuss about the Magic Sets Algorithm for the Deductive databases with an example. (16)

(OR)

b) Describe the various multidimensional structures for image databases with examples. (16)