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**Question Paper Code : 45854**

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Elective

Software Engineering

XCS 010 — ADVANCED DATABASE MANAGEMENT SYSTEMS

(Common to 5 Year M.Sc. — Information Technology and M.Sc. Computer Technology)

(Regulation 2003)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is query optimization?
2. Define strict two-phase locking protocol.
3. What is skew ? List out its types.
4. Define inter query parallelism. Give suitable example.
5. What are the applications of XML?
6. What is persistence ? State its purpose.
7. What is the role of performance benchmark tools?
8. Define data mining.
9. What are the limitations of mobile databases?
10. State the use of time in databases.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the basic steps of query processing (8)  
(ii) Compare cost-based query optimization with heuristic based query optimization. (8)

Or

- (b) Explain time stamp based protocol with example.

12. (a) (i) What are the different types of partitioning techniques ? Explain. (8)  
(ii) Explain about intra query parallelism with an example. (8)

Or

- (b) Explain two phase commit and three phase commit protocol used for concurrency control in distributed transaction.

13. (a) Explain the XML data query and transformation in detail.

Or

- (b) (i) What is complex data type ? Explain with example. (8)  
(ii) Compare object-oriented databases with object relational databases. (8)

14. (a) What is the need for performance tuning ? Explain the any two performance tuning methods.

Or

- (b) Explain the architecture of a data warehousing system with neat sketch.

15. (a) (i) Explain the significances of deductive databases. (8)  
(ii) Write note on multimedia databases. (8)

Or

- (b) Explain the following  
(i) Spatial databases (8)  
(ii) Active databases. (8)