JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- Dec. 2017

B.Tech/M.Tech VII/I Semester

COURSE CODE: 10M11CI113   MAX. MARKS:35

COURSE NAME: Advanced Database Systems

COURSE CREDITS: 3   MAX. TIME: Two Hours

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1. What are the possible states of a transaction?   [3 marks]

Q2. Explain the graph based protocol to control the concurrent access to a database?   [3 marks]

Q3. What are the advantages of fuzzy checkpointing? How fuzzy checkpointing is performed? [4 marks]

Q4. Explain basics steps in query processing, how the cost of query is measured?   [5 marks]

Q5. Differentiate Merge-join and Hash-join? Explain their advantages and shortcomings?   [5 marks]

Q6. Explain the dynamic programming in optimization and the cost analysis of the optimization? Is heuristic optimization algorithms are better in terms of computational complexity as compared to the cost based optimization?   [5 marks]

Q7. Describe various partitioning techniques available to perform I/O parallelism in database? Compare these techniques in terms of their suitability for sequential access, and range/point queries?   [5 marks]

Q8. What are the issues to perform query optimization in parallel database as compared to query optimization in sequential databases? Also explain the issues in the design of parallel system? [5 marks]