

DECEMBER 2014

P/ID 16153/PITSC

Time : Three hours

Maximum : 100 marks

PART A — ($6 \times 5 = 30$ marks)

Answer any SIX questions.

1. What is a Relation Schema and a Relation?
Describe with one example.
2. List out the phases of database development process. Discuss.
3. Write short notes on tuple relational calculus.
4. What is view in SQL? How is it defined?
5. When is a functional dependency F said to be minimal?
6. How can you transform BCNF to 4NF? Discuss.
7. Write short note on wait-die and wound-wait algorithm.
8. Describe the basic concepts of parallel system.

PART B — (7 × 10 = 70 marks)

Answer any SEVEN questions.

9. How to represent strong entity sets using table? Explain with example.
10. How to perform “outer join” operation in a relational algebra operation? Explain with example.
11. Specify the ways to organize records in files and explain any one file organization in detail.
12. What are the steps involved in query processing? How is the execution of a query optimized?
13. Explain the conflict serializability and view serializability.
14. What is concurrency control? How is it implemented in DBMS? Explain.
15. Describe how shadow paging helps in crash recovery.
16. What are the basic issues while implementing distributed databases? Explain.
17. Discuss the structure of the XML document.