



- Notes :
1. Due credit will be given to neatness and adequate dimensions.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answer necessary with the help of neat sketches.
 4. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Construct an E-R diagram for a car insurance company with a set of customers, each of whom owns a number of cars. Each car has a number of recorded accidents associated with it. 7

- b) Compare and contrast between strong entity and weak entity set. 7

OR

2. a) Explain the difference between the ER model and semantic object model. 7

- b) Explain with example set operations in SQL. 7

3. a) Explain various transparencies in a distributed application. 6

- b) Explain distributed catalogue management in detail. 7

OR

4. a) Explain the following : 6
i) Mobile Database. ii) Distributed database Recovery.

- b) Explain the functional schematic of an integrated distributed DBMS. 7

5. a) Write short note on: 8
i) Semantic Grids.
ii) Service oriented architecture and grid.

- b) Explain how cloud computing is used as emerging trends in distributed computing environment. 5

OR

6. a) Explain the need of data warehouse. What are the benefits of data warehouse. 7

- b) Explain what do you understand by information flow mechanism. 6

7. a) Explain the difference between OLTP and OLAP. 7

- b) Explain the metadata repository in data-warehouse. 7

OR

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| 8. | a) | Explain data warehouse scheme in detail. | 7 |
| | b) | Explain. | 7 |
| | | i) ROLAP. | |
| | | ii) MOLAP. | |
| | | iii) HOLAP. | |
| 9. | a) | Explain the data mining functionalities : | 8 |
| | | i) Association. | |
| | | ii) Classification. | |
| | b) | Explain cluster analysis in brief. | 5 |
| OR | | | |
| 10. | a) | Explain the main theoretical foundations that have been proposed for data mining. | 7 |
| | b) | What is evolution analysis? Explain. | 6 |
| 11. | | Explain Bayesian classification in detail. | 13 |
| OR | | | |
| 12. | | What are different types of association rules? Explain each in details. | 13 |
