

Con/1391-07.

OT-5843

3

(3 Hours)

[Total Marks : 75

- N.B. : (1) Attempt any five questions.
 (2) Figures to the right indicate full marks.
 (3) Answers to the two sections must be written in separate answer-books. and should be submitted separately.

Section I

- Q. 1 a What is operational systems and informational systems? Compare their characteristics. 8
 b What is CRM (Customer Relationship Management)? How can you make your data warehouse CRM-ready? 7

OR

- Q. 2 a Discuss the data flow in data storage. List the functions and services of in data storage area. 8
 b Describe the slowly changing dimensions. What are the types of slowly changing dimension? Explain each in brief. 7

OR

- Q. 3 a What are hypercubes? How do they apply in an OLAP system? 8
 b When is a Pilot data mart useful? 7

OR

- Q. 4 a Discuss the various data mining tasks. 8
 b Describe K-Mean Clustering algorithm in detail. 7

- Q. 5 a Discuss Apriori algorithm in detail. 8
 b Discuss in detail Web usage mining. 7

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- Q. 6 a Describe any one Distance based algorithm for classification. 8
 b Write note on Pattern matching. 7

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SECTION - II

- 7/ a. Explain the need for Enhanced Entity Relationship model. Explain Specialization, Generalization and Categorization with examples. 7
- b. Explain Type hierarchy and Inheritance in context with Object oriented database systems. 8

OR

8. a. Explain the following with respect to object query language: 7
- Query results and path expressions
 - Extracting Single Elements from Singleton Collections
 - Database Entry points and Iterator Variables
- b. With respect to object oriented databases explain Polymorphism, Multiple Inheritance, Selective Inheritance, Versions and Configurations. 8
9. a. Compare Relational, object oriented and object relational database systems. 7
- b. What are the different ways of partitioning the data? Explain with examples. 8

OR

10. a. Discuss the implementation issues for extended type systems. 7
- b. Compare parallel and distributed technologies. What are the advantages of distributed databases? 8
11. a. What is a document type definition? What is a document schema? What are the advantages of document schema over document type definition? 7
- b. Enumerate the features of spatial databases. What are spatial queries? How are they categorized? Explain each category. 8

OR

12. a. What is an active database? What are its drawbacks? How is reactive behavior specified in the database? Explain giving examples. 7
- b. What type of spatial analysis is possible with Geographic Information System? Explain. 8

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