

[5926]-124

**T.E. INFORMATION TECHNOLOGY****Advanced Database and Management System (Elective-I)**  
**(2019 Pattern) (Semester - I) (314445B)**

Time : 2½ Hours]

[Max. Marks : 70]

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicates full marks.
- 4) Assume Suitable data if necessary.

- Q1)** a) Explain four types of NOSQL database with example. Explain advantage and disadvantage of MongoDB. [10]  
 b) Explain features of XML and JSON with example [8]

**OR**

- Q2)** a) Explain comparison between relational and NoSQL database. What is Map Reduce? Explain with suitable example. [10]  
 b) Differentiate between apache cassandra and MongoDB. [8]

- Q3)** a) Explain characteristics and limitations of data warehouse. Explain star schema in detail with example. [12]  
 b) Explain architecture of ROAP in detail. [5]

**OR**

- Q4)** a) Explain architecture and components of data warehouse. Explain snowflake schema in detail with example. [12]  
 b) Explain architecture of HOAP in detail. [5]

**P.T.O.**

- Q5)** a) Explain KDD seven step process in detail. [7]  
b) Explain benefits of data mining software in detail. Explain application of data mining software in telecommunication industry. [10]

**OR**

- Q6)** a) Explain architecture of data mining in detail. [7]  
b) Explain difference between predictive and descriptive algorithms. Explain application of data mining software in healthcare. [10]

- Q7)** a) Explain deductive database in detail with example. [8]  
b) Explain geographical information system and Mobile databases in detail with example. [10]

**OR**

- Q8)** a) Explain spatial database in detail with example. [8]  
b) Explain genome data management and Multimedia databases in detail with example. [10]

