

Total No. of Questions : 8]

PA-1504

SEAT No. :

[Total No. of Pages : 2

[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]

