

**SUPPLEMENTARY**  
**BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)**  
**B.C.A. Sem-VI :SUMMER- 2022**  
**SUBJECT : DATA WAREHOUSING & DATA MINING**

Day : Thursday

Time : 10:00 AM-01:00 PM

Date : 25-08-2022

S-18798-2022

Max. Marks : 60

**N.B.:**

- 1) **Q.4 is COMPULSORY.**
- 2) Answer **ANY TWO** questions from Q.1, 2, 3 in Section – I.
- 3) Answer **ANY TWO** questions from Q.5, 6, 7 in Section – II.
- 4) Figures to the right indicate **FULL** marks.
- 5) Answers to both the sections should be written in **SAME** answer books.
- 6) Draw a labeled diagram **WHEREVER** necessary.

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**SECTION – I**

- Q.1** Distinguish between:
- a) OLAP & OLTP (06)
  - b) Database & Data Warehouse (06)
- Q.2** Describe Data Mart. Why is it required? Explain the different types of data marts in detail. (12)
- Q.3** Describe the need for data pre-processing in the process of data mining. Explain various data pre-processing techniques in detail. (12)
- Q.4** Write short notes on (Any 3) (12)
- a) Concept Hierarchies
  - b) OLAP Operations
  - c) Support & Confidence
  - d) Prediction
  - e) Decision Tree

**SECTION – II**

- Q.5** What is Apriori algorithm to find frequent item sets? Explain with the help of an example. (12)
- Q.6** What is supervised vs unsupervised learning? Discuss K-Nearest neighbor classification algorithm with an example. (12)
- Q.7** What is outlier detection? Explain distance based outlier detection. What are the areas of applications of outlier detection? (12)

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