BACHELOR OF TECHNOLOGY (CBCS) (2020 COURSE)

B.Tech.Sem - VI Information Technology : WINTER : 2023

SUBJECT : DATA WAREHOUSING & DATA MINING

Day : Tuesday | Time : 10:00 AM-01:00 PM

Date : 21-11-2023 | **W-24745-2023** | Max. Marks : 60

N.B.

1) All questions are **COMPULSORY**.
2) Figures to the **RIGHT** indicate **FULL** marks.
3) Assume suitable data **WHEREVER** necessary.
4) Draw neat labeled diagrams **WHEREVER** necessary.

Q.1 Illustrate the generic architecture of a data warehouse with a neat diagram. Summarize each component of the architecture. **(10)**

OR

Q.1 Enlist and elaborate with example of sales data the various OLAP operations. Infer the role of OLAP in data warehouse. **(10)**

Q.2 Categorize the main categories of statistical description used in data mining. Enlist and elaborate with example of insurance database the various statistic terms that can be used for data mining. **(10)**

OR

Q.2 Discuss the role and process of data transformation and data discretization in the data mining process. **(10)**

Q.3 Classify pattern mining based in pattern diversity. **(10)**

OR

Q.3 Outline a method for mining multilevel association. Use an example of suitable organizational data. **(10)**

Q.4 **(10)**

n=165	Predicted:No	Predicted:No
Actual:No	50	10
Actual :Yes	5	100

For the confusion matrix given above, calculate precision, recall and accuracy. Also elaborate these terms.

OR

Q.4 Define "Classification" with reference to data mining. Enlist models for classification. How are these models evaluated for accuracy? **(10)**

Q.5 Compare clustering and outlier analysis. Give two examples each. **(10)**

OR

Q.5 Consider reference string S(4,3,5,7,9,10,12,13,16,99) Apply K means clustering algorithm by taking centers C1=4 and C2 =10 as initial means. Calculate cluster elements for the clusters C1 and C2 after three phases. **(10)**

Q.6 Weka provides association rule learners. Identify and elaborate such types of learners with examples. **(10)**

OR

Q.6 Discuss Weka interface for clustering. **(10)**

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