Suryadatta Education Foundation's

Suryadatta Institute of Management & Mass Communication

MCA Department

End -Term Examination- November ,2023

MCA II Year (SEM-III)

Subject: DATA WAREHOUSING & DATA MINING

Subject Code:IT-32 **Total Marks: 50**

Date: **Time:**

Note:

Q1. Attempt any four questions: [4*10=40]

(a) What is classification and explain Support Vector Machines (SVM) with example

(b) Explain K-means algorithm with example?

(c) Consider the Market basket transactions shown below. Assuming the minimum support = 50% and Minimum Confidence = 80%

a) Find all frequent item sets using Apriori algorithm.
b) b) Find all association rules using Apriori algorithm.

Transaction Id	Items Bought
T1	{Mango, Apple, Banana, Dates}
T2	{Apples, Dates, Coconut, Banana, Fig}
T3	{Apple, Coconut, Banana, Fig}
T4	{Apple, Banana, Dates}

OR

What is a decision tree? How a decision tree works?

(d) Describe FP Tree algorithm with example

OR

List all of the strong association rules (with support S and confidence C) Matching the following metarule where x is a variable representing customers & item i denotes variables representing items (e.g, “A”, “B” etc.) V×E transactions, buys (X, item 1) ∧ buys(X, item 2) = >buys(X, item3) [S,C].

Q 2. Attempt any two short notes: [2*5=10]

(a) Neural network

(b) Temporal and spatial data mining

(c) Knowledge Discovery Process (KDP).

(d) Components of data warehouse.