

OR

- 6 a. Explain the various measures of evaluating association patterns. (08 Marks)
- b. Consider the following transaction data set :
- Construct FP tree
 - Generate the list of frequent item set ordered by their corresponding suffixes using FP Growth algorithm with minimum support count = 3

Transaction ID	Items bought
100	{K, E, M, N, O, Y}
200	{D, E, K, N, O, Y}
300	{A, E, K, M}
400	{C, K, M, U, Y}
500	{C, E, I, K, O}

Table Q6(b)

(12 Marks)

Module-4

- 7 a. Define Classification with a neat diagram, explain the general approach for solving classification model. (10 Marks)
- b. Find the entropy, information gain, Gain in terms of Gini-Index for the data set given below, when splitting on attribute A and B. (10 Marks)

A	B	Class label
T	F	+
T	T	+
T	T	+
T	F	-
T	T	+
F	F	-
F	F	-
F	F	-
T	T	-
T	F	-

Table Q7(b)

OR

- 8 a. What is rule based classifier? Write a sequential covering algorithm for rule based classifier and explain with example. (10 Marks)
- b. Consider the data set shown below and determine the class label for a test sample (A = 0, B = 1, C = 0) using the Naïve Bayes classification approach.

Record	A	B	C	Class
1	0	0	0	+
2	0	0	1	-
3	0	1	1	-
4	0	1	1	-
5	0	0	1	+
6	1	0	1	+
7	1	0	1	-
8	1	0	1	-
9	1	1	1	+
10	1	0	1	+

Table Q8(b)

(10 Marks)

Module-5

- 9 a. What is cluster analysis? Explain different types of clusters with examples. (10 Marks)
- b. Explain K-means clustering algorithm with example. (10 Marks)
- OR
- 10 a. Explain DBSCAN algorithm with example (10 Marks)
- b. Explain Agglomerative Hierarchical clustering algorithm with different proximity between clusters. (10 Marks)

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