

# MCAC:203-Data Mining, Mid Sem. Exam

Time: One Hours

Max. Marks: 20

Note: All questions are compulsory.

- Find frequent itemsets from the given transactional dataset using Eclat where min\_sup is 2.

Tid	Items
10	A, C, D
20	B, C, E
30	A, E, C, E
40	B, E

- Calculate the Euclidean and Manhattan distances for the given data points.

X	Y
2	8
7	7
4	6
5	4
6	9

- Perform dimensionality reduction on the given dataset using Principal Component Analysis.

	$X_1$	$X_2$
E1	4	4
E2	6	6
E3	10	9
E4	8	5

- A survey was conducted on 1000 students, recording their regions and preferred courses. The table below summarizes the observed counts for each combination. First, calculate the expected frequencies, then evaluate the correlation relationship using the chi-square test.

	NCR	Others
MCA	350	400
M.Sc	50	200

- Show the transformation of  $S = [3, 5, 0, 2, 3, 2, 2, 3]$  using the Haar-2 Approach.
- Distinguish between Interval-Scaled Attributes and Ratio-Scaled Attributes.