INDIAN STATISTICAL INSTITUTE

(MS-QMS)_2020

MID-SEMESTER EXAMINATION

(Pattern Recognition)

Duration: 90 minutes   Maximum Marks: 30

Note: Answer all question

1. Describe four different types of attribute with examples and provide their mathematical properties.   [4]

2. Describe with examples and equations; the measures of Location, spread, Shape and dependency.   [1x4]

3. Describe the motivations of standardization and normalization of data sets? Give at least one method of performing these operations   [2+2]

4. Differentiate between BOX-and-WHISKER plot and Histogram plot. Which plot is more informative?   [4]

5. Find the variance-covariance matrix of XX   [6]

    XX=[2   1   1
        3   2   2
        3   2   0
        1   0   3
        0   2   1
        5   7   2
        7   0   3
        3   7   4
        2   1   1];

6. Define two properties of probability distribution function and variance-covariance matrix.   [4]

7. Why we go for data pre-processing? Discuss any FIVE pre-processing steps.   [4]