

INDIAN STATISTICAL INSTITUTE

(MS-QMS)_2024

MID-SEMESTER EXAMINATION

(Pattern Recognition)

Duration: 90 minutes

Maximum Marks: 30

Note: Answer any FIVE

1. What are the motivations for adaptive filters and intelligent filters? How it is different from an Intelligent Machine? Provide appropriate supporting discussions to your answer. [2+2+2]
2. Provide a complete interpretation of the Box and Whisker Plot Analysis of a data set. [6]
3. Should we go for the standardization of the data? Provide supporting discussions to your answer. How standardization is different from Normalization? Explain both operations with the appropriate format of the equations. [2+4]
4. Differentiate Feature selection and extraction methods of data pre-processing. Describe the challenges involved in these operations. [3+3]
5. What is principal component analysis? Describe the working principles and significance of this operation in a decision-making process. [6]
6. State and describe the working steps of a linear classifier, starting from the given data set to the performance analysis of the model. [6]

=====End of the Question paper=====