

INDIAN STATISTICAL INSTITUTE

M.S (QMS) First Year

Second Semester - Pattern Recognition

Date: 27-02-2015

Duration: 60 minutes

Maximum Marks: 40

Note: Answer all question

1. Discuss four performance measurement indexes of any classifier. [6]
2. Differentiate between feature selection and feature extraction procedures. [9]
Explain the basic steps of feature selection. Describe how principal component analysis can be used for feature reduction?
3. Describe the advantages and disadvantages of Mahalanobis [5]
Distance Function
4. Explain the K-nearest neighbour decision rule for pattern classification. [6]
Point out the advantages and disadvantages in using this rule.
5. Write a note on linear and non-linear discriminate functions for classification. [6]
6. Derive the minimum distance classifier from Bayes decision rule. [8]