KNT/KW/16/5760

Master of Science (M.Sc.) (Computer Science) Semester—IV (C.B.S.) Examination

Elective—II

PATTERN RECOGNITION

Paper—4

Time : Three Hours] [Maximum Marks : 100

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat diagrams wherever necessary.

EITHER

1. (A) Explain the concept of Bayesian Decision theory. 10

(B) Write the pattern recognition classifiers. 10

OR

(C) Describe the discriminant functions in detail with suitable example. 10

(D) Explain the decision surface in detail. 10

EITHER

2. (A) What do you mean by parameter estimation ? Explain any one estimation method in detail. 10

(B) Explain the Principle Component Analysis (PCA) in detail. 10

OR

(C) Explain the concept of decoding and learning. 10

(D) How to compute hidden Markov model ? Explain. 10

EITHER

3. (A) Write the method of Parzen-Window. 10

(B) Explain the Probabilistic Neural network. 10

OR

(C) Describe the structure of Fuzzy classification. 10

(D) Explain linear programming algorithm in detail. 10

EITHER

4. (A) Discuss the architecture of multi-layered network. 10

(B) Describe the learning expression in the back propagation learning algorithm. 10

OR

(C) Explain in brief various applications of Feedforward Neural network. 10

(D) Explain with a neat diagram the unsupervised learning algorithm and clustering. 10

5. (A) Write notes on normal density. 5

(B) What is the process of Bayesian parameter estimation. 5

(C) Discuss the support vector machine. 5

(D) Explain the hierarchical clustering. 5