

**FACULTY OF INFORMATICS**

B.E. 4/4 (I.T.) II-Semester (Main) Examination, May / June 2012

**Subject : Pattern Recognition  
(Elective-IV)**

Time : 3 Hours

Max. Marks: 75

**Note:** Answer **all** questions of Part - A and answer any **five** questions from Part-B.

**PART – A (25 Marks)**

1. What is Feature extraction?
2. What is unsupervised learning?
3. Define classifier.
4. What is univariate density?
5. What is supervised learning?
6. What is pattern recognition?
7. What is k-means clustering?
8. What is preprocessing?
9. What is principle component analysis?
10. What are the applications of pattern recognition?

**PART – B (5x10=50 Marks)**

11. Discuss Bayesian decision theory. (10)
12. Discuss compound Bayesian decision theory. (10)
13. Discuss maximum likely hood estimation. (10)
14. Explain Learning of HMM. (10)
15. Explain Fuzzy k-means clustering. (10)
16. Explain Stepwise optimal Hierarchical clustering. (10)
17. Discuss independent component analysis. (10)

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