Code: R7421207

R7

B.Tech IV Year II Semester (R07) Advanced Supplementary Examinations June 2012

PATTERN RECOGNITION

(Common to IT and CSSE)

Time: 3 hours   Max Marks: 80

Answer any FIVE questions

All questions carry equal marks

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1 (a) Draw and explain the architecture of pattern recognition system.
   (b) Explain in detail about the training samples.

2 (a) Explain the following:
         (i) Decision rule   (ii) Bayes decision rule   (iii) Evidence
   (b) Discuss briefly about the Bayesian's decision theory.

3 (a) Distinguish between univariate density and multivariate density.
   (b) Discuss in detail about the three dimensional binary data for Bayesian decision problem.

4 (a) How to estimate the multivariate parameter for Bayesian by using Gaussian technique.
   (b) Differentiate between training data, Bayesian estimation and Bayesian learning.

5 (a) Describe briefly about the estimation for maximum likelihood.
   (b) List and explain the different assumptions for mixture densities and identifiability.

6   Write short notes on the following:
   (a) Clustering.
   (b) Dimensional reduction.
   (c) Monotonicity constraint.
   (d) Component analysis.

7 (a) Define and explain the hidden Markov model with different symbols used in it.
   (b) Explain in detail about the decoding problem.

8 (a) Distinguish between MMI training and ML training.
   (b) Give brief description about the state emission HMM.

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