BT–6/M-23   **46293**

APPLIED MACHINE LEARNING

Paper–PC–CS–AIDS–308A

Time : Three Hours]   [Maximum Marks : 75

Note : Attempt *five* questions in all selecting at least *one* from each unit.

UNIT–I

1. Elaborate the concept of machine learning in today's world. Discuss the various examples of applications of machine learning in diverse fields.   (5+10=15)

2. Discuss the bayes theorem, naive classifier and bayesian belief network in detail.   (15)

UNIT–II

3. Discuss the concept of supervised learning. Explain the concept of bias and variance in detail. Describe the confusion matrix as a parameter to evaluate performance.

    (5+5+5=15)

4. Discuss the linear and nonlinear regression using support vector machines.   (15)

UNIT–III

5. Discuss the fundamental model of k-nearest neighbor (kNN) and principal component analysis in detail. (15)

6. Discuss the concept of classification. Differentiate between classification and regression problem. Discuss linear discriminant analysis (LDA) methods of dimension reduction. (5+3+7=15)

UNIT–IV

7. Discuss the feed forward and recurrent neural networks in detail. (15)

8. Discuss the principle of neuro fuzzy and genetic fuzzy system in detail. (15)