FAST MACHINE LEARNING

Internal Assessment: 50 **Full Marks: 100** **Theory Credit: 04**

MODULE-I:

Introduction: Basic definitions, types of learning, hypothesis space and inductive bias, evaluation, cross-validation.

Linear regression, Decision trees, over fitting.

MODULE-II:

Instance based learning, Feature reduction, Collaborative filtering based recommendation. Probability and Bayes learning.

MODULE-III:

Logistic Regression, Support Vector Machine, Kernel function and Kernel SVM.

Neural network: Perceptron, multilayer network, back propagation, introduction to deep neural network.

MODULE-IV:

Computational learning theory, PAC learning model, Sample complexity, VC Dimension, Ensemble learning.

Clustering: k-means, adaptive hierarchical clustering, Gaussian mixture model

BOOKS:

1. Machine Learning. Tom Mitchell. First Edition,
2. Introduction to Machine Learning Edition 2, by EthemAlpaydin McGraw- Hill, 1997