

8456

**B.Tech. (CSE) (AI) VIth Semester
Examination, 2024**

ESSENTIALS OF MACHINE LEARNING

Paper : AI-601

Time : 3 Hours]

[M.M. : 70

Note :- Answer any *five* questions. All questions carry equal marks.

1. Explain various learning techniques involved in unsupervised learning. Also discuss application of machine learning. [14]

2. How to develop/frame inductive learning and summarize the machine learning process ? [14]

3. Discuss the difference and trade off between two factors of bias and variance. How these factor play a role in machine learning models ? Explain. [14]

4. Explain logistic regression with suitable example. [14]

5. Explain difference cross validation techniques. What cross-validation techniques would you use on a time series dataset ? [14]

6. What is the difference between Type I and Type II error ? [14]

7. List the advantages of SVM and how Optimal Hyperplane differ from Hyperplane ? [14]

8. Discuss the major drawback of K-nearest neighbour learning alorithm and how it can be corrected. [14]

9. Explain boosting and ADA boosting algorithm with neat sketch. [14]

10. What is reinforcement learning ? Explain its detailed concept. [14]