

3717

B.Tech. (Computer Science & Engineering)

8th Semester (G-Scheme) Examination,

December-2023

MACHINE LEARNING

Paper-PCC-CSE-402-G

Time allowed : 3 hours]

[Maximum marks : 75

Note : Question No. 1 is compulsory. Attempt five questions in total, selecting one question from each unit. All questions carry equal marks.

1. Write short notes on : 6×2.5=15
- (a) Soft Margin Vs Hard Margin in SVM.
 - (b) Regression
 - (c) ML Life Cycle
 - (d) Underfitting Vs Overfitting
 - (e) Entropy
 - (f) Ensemble Techniques in ML

Unit-I

2. Describe the concept of Machine Learning. Also, discuss its primary features and chief applications. 15

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3. Write different types of Machine Learning algorithms. Discuss applications of each Machine Learning technique. 15

Unit-II

4. (a) Explain Data pre-processing steps in ML. 7
(b) Explain term Curse of Dimensionality. Discuss significance of Dimension reduction techniques. 8
5. Is PCA a supervised or unsupervised technique ? Discuss it. Write steps of PCA for Dimension reduction Machine Learning. 15

Unit-III

6. Explain working principle of SVM algorithm in detail. 15
7. Why K-Nearest Neighbour is known as Lazy Learner ? Discuss KNN algorithm with the help of example. 15

Unit-IV

8. Write the differences between classification and clustering. Also, discuss working of Random Forests in detail. 15
9. Discuss various performance metrics used for evaluation of ML models. 15