Time 1:30 Hrs

Max. Marks 20

Note: All questions are compulsory and have internal choice.

Ques.1: Define Machine Learning. Explain its importance in real-world applications with suitable examples. (CO1 5 Marks)

OR

What are the different types of Machine Learning? Explain with examples. (CO1 5 Marks)

Ques.2: Discuss the role of function approximation in Machine Learning.

OR

Explain the differences between Supervised, Unsupervised, and Reinforcement Learning with real-life applications. (CO2 5 Marks)

Ques 3: What is the bias-variance tradeoff?

OR

Differentiate between **parametric and non-parametric models** in Machine Learning.

Ques 4: What is the "Curse of Dimensionality" in machine learning? Discuss its effects on model performance (CO2 5 Marks)

OR

Explain the concept of Overfitting and Underfitting in machine learning. How can they be prevented?

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