

Code No: 158DN

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech IV Year II Semester Examinations, July/August - 2022****MACHINE LEARNING****(Electrical and Electronics Engineering)****Time: 3 Hours****Max.Marks:75**

Answer any five questions
All questions carry equal marks

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- 1.a) Explain the candidate elimination algorithm and its limitations. Give example.
- b) What is the role of Inductive Bias in decision tree learning process? Discuss. [8+7]
- 2.a) Explain the working of Find-S algorithm with suitable example.
- b) What is decision tree based learning? How it is represented? Give some problems for which decision tree based learning is appropriate. [7+8]
- 3.a) What is meant by a perceptron and multilayer networks? How can a perceptron learn? Explain.
- b) How to find the differences in error of two hypotheses? Explain. [8+7]
- 4.a) What is learning? What is the role of learning algorithm in neural networks? Explain.
- b) Explain the backpropagation algorithm with face recognition an example. [8+7]
- 5.a) Explain the maximum likelihood hypothesis for predicting probabilities in Bayesian learning.
- b) What is case based reasoning? What are its applications? Explain. [8+7]
- 6.a) State Baye's theorem. Illustrate Bayes theorem with an example.
- b) Describe about the mistake bound model of learning in detail. [7+8]
- 7.a) Explain the basic algorithm for learning sets of First-Order Rules.
- b) Describe the sequential covering algorithm for learning disjunctive set of rules. [7+8]
- 8.a) Discuss Explanation-Based learning of search control knowledge.
- b) What is the use of prior knowledge to initialize a hypothesis for learning? Explain.[7+8]

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