

Code No: 155BZ**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, February - 2022****MACHINE LEARNING****(Information Technology)****Time: 3 hours****Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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- 1.a) What do you mean by a well –posed learning problem?
- b) Explain the important features that are required to well-define a learning problem. [6+9]
- 2.a) Discuss about candidate elimination algorithm in detail with example.
- b) Elaborate the issues in Decision Tree learning. [9+6]
3. Demonstrate multilayer feed forward mechanism in back propagation with suitable example and how the error is back propagated. [15]
- 4.a) How to estimate hypothesis accuracy in artificial neural networks?
- b) Explain the methods for comparing the accuracy of two hypotheses. [7+8]
- 5.a) Explain in detail about Naïve Bayes algorithm for learning classification problems.
- b) Discuss Maximum Likelihood and Least Square Error Hypothesis. [9+6]
6. Demonstrate k-nearest neighbor algorithm with suitable example. [15]
- 7.a) What are the salient features of a Genetic Algorithm?
- b) Demonstrate sequential covering algorithm with suitable example. [7+8]
- 8.a) Demonstrate explanation-based learning of search control knowledge.
- b) Explain how to alter the search objective by using prior knowledge. [7+8]

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