Code No: 156BN **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, August/September - 2021
MACHINE LEARNING
(Computer Science and Engineering)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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1.a) Define Well-Posed problem. Illustrate any four examples for Well-Posed problems.
b) What do you mean by Candidate elimination? Explain. [7+8]

2.a) What are the concepts of learning as search? Discuss.
b) Discuss the appropriate problems for decision tree learning. [8+7]

3.a) Contrast the hypothesis space search in ID3 and candidate elimination algorithm.
b) Explain the Back propagation learning algorithm and its limitations. [7+8]

4.a) How a multi layered network learns using a gradient descent algorithm? Discuss.
b) Explain the methods for comparing the accuracy of two hypotheses. [8+7]

5.a) State Bayes theorem. Illustrate Bayes theorem with an example.
b) Describe the mistake bound model of learning. [8+7]

6.a) Explain Gibs algorithm with an example.
b) State and explain the Minimum Description Length Principle. [8+7]

7.a) Discuss about Hypothesis space search in genetic algorithms.
b) Write the basic algorithm for learning sets of First-Order Rules. [8+7]

8.a) Discuss Explanation-Based learning of search control knowledge.
b) Explain the inductive analytical approaches to learning. [8+7]

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