

**R18**

**Code No: 155BZ**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech III Year I Semester Examinations, March - 2021**

**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) Explain about Decision Tree Learning Algorithm with an example.  
b) Summarize the issues in Decision Tree learning. [8+7]
- 2.a) Demonstrate face recognition application using back propagation.  
b) How to estimate hypothesis accuracy in artificial neural networks? [8+7]
- 3.a) Discuss about Gibbs algorithm with suitable example.  
b) Describe k-nearest neighbor algorithm. Elaborate why it is called instance based learning? [7+8]
- 4.a) Distinguish between active learning and reinforcement learning.  
b) Demonstrate Q-learning algorithm with an example. [6+9]
- 5.a) Demonstrate explanation-based learning of search control knowledge.  
b) How to augment search operators using prior knowledge? [8+7]
- 6.a) Explain about concept learning and list out its benefits.  
b) How to compare various learning algorithms? [7+8]
- 7.a) Explain the problems in neural networks learning.  
b) Explain how to estimate the hypothesis accuracy. [7+8]
- 8.a) Explain about K-nearest neighbor algorithm.  
b) What are the reasons for the popularity of genetic algorithms? [8+7]

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