



TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech VI Semester Regular Examinations, June/July2023

MACHINE LEARNING (CSE)

Maximum Marks: 70

Date:30.06.2023 Duration: 3 hours

- Note: 1.This question paper contains two parts A and B.
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10 X 2 Marks=20 Marks)

- 1 List out the perspectives and issues in machine learning.
- 2 What does concept learning mean?
- 3 What is decision tree method?
- 4 Define back propagation algorithm.
- 5 State the type of sequences used in Gibbs sampling.
- 6 What is an example of eager learning?
- 7 What are the 4 methods of learning?
- 8 Define Prolog-EBG algorithm.
- 9 Which learning technique is inductive learning?
- 10 What is motivation in AI?

Part-B

Answer All the following questions.

(5 X 10 Marks=50 Marks)

- 11 A. Discuss the limitations of machine learning. 5 Marks
B. What are the types of learning problems in machine learning? 5 Marks
OR
- 12 A. Explain Find-S algorithm with maximally specific hypothesis. 5 Marks
B. Discuss the version space in candidate elimination algorithm. 5 Marks
- 13 A. Describe the three types of artificial neural network? 5 Marks
B. Explain the appropriate problems for decision tree learning with example. 5 Marks
OR
- 14 A. What is back propagation in multilayer neural network? Explain. 5 Marks
B. Describe the formula for confidence interval in machine learning. 5 Marks
- 15 A. Briefly explain the minimum description length principle. 5 Marks
B. How is the Bayes theorem used in machine learning? Explain with example. 5 Marks
OR

- 16 A. Describe Gibbs sampling algorithm. 5 Marks
B. Define k-means clustering and how it works? 5 Marks
- 17 A. Differentiate FOCL and FOIL algorithm in machine learning? 5 Marks
B. Describe any three types of learning rules. 5 Marks
- OR
- 18 A. Write Sequential Covering algorithm. 5 Marks
B. How does domain theory work? Explain with example. 5 Marks
- 19 A. Compare inductive learning and analytical learning 5 Marks
B. Explain analytical learning in Machine Learning. 5 Marks
- OR
- 20 A. Distinguish inductive and deductive learning methods. 5 Marks
B. What is Q table in reinforcement learning? Explain. 5 Marks