



R20 Regulation

Subject code:3P5GD

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, December 2024

INTRODUCTION TO MACHINE LEARNING (CSE(AI&ML))

Maximum Marks: 70

Date:03.01.2025

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 (10X2M=20) Marks)		CO	Bloom Tx
1	What are the important objectives of machine learning?	1	L1
2	What are the basic design issues and approaches to machine learning?	1	L1
3	Define (a) Preference Bias (b) Restriction Bias	2	L1
4	What is decision tree?	2	L1
5	State Bayes theorem.	3	L1
6	Under what conditions is successful learning possible?	3	L1
7	What is a fool?	4	L1
8	What is Analytical Learning?	4	L1
9	What is the essential difference between analytical and inductive learning methods?	5	L1
10	What is Q Learning?	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	What are the steps involved in designing a learning system. [10M]	1	L2
OR			
12	What do you mean by a well-posed learning problem? Explain the important features that are required to well-define a learning problem. [10M]	1	L2
13	Explain backpropagation algorithm [10M]	2	L2
OR			
14	Explain the basic decision tree learning algorithm [10M]	2	L2
15	Draw the perceptron network with the notation. Derive an equation of gradient descent rule to minimize the error. [10M]	3	L3
OR			
16	Explain Naïve Bayes Classifier with an Example. [10M]	3	L2
17	Explain Sequential covering Algorithms in detail. [10M]	4	L2
OR			

18	Explain Prolog-EBG [10M]	4	L2
19	Explain reinforce learning & Q Learning [10M]	5	L2
	OR		
20	Discuss the hypothesis space search in inductive- analytical approaches to learning [10M]	5	L2