



R20 Regulation

Subject code:3P5GA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, May 2025

**INTRODUCTION TO AI & NEURAL NETWORKS
(CSE(AI&ML))**

Maximum Marks: 70

Date: 17.06.2025

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.
 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)		Marks	CO	BTL
1	What are the problems underlying with AI?	2M	1	L1
2	Give a brief note on Intelligent Systems.	2M	1	L1
3	Write in detail about Knowledge Representation Issues?	2M	2	L1
4	Write in detail Representing Simple Facts in Logic?	2M	2	L1
5	What is Augmenting a Problem Solver?	2M	3	L1
6	What is Depth first Search?	2M	3	L1
7	What is Statistical nature of the Learning Process?	2M	4	L1
8	Explain learning with teacher and learning without teacher.	2M	4	L1
9	Write the role of Single Layer Perceptrons>	2M	5	L1
10	Write Least Mean Square Algorithm.	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	a) Define problem and mention its characteristics in detail. b) Explain Artificial Intelligence with its Problems.	5M 5M	1	L2
OR				
12	Design an AO* algorithm and explain why it is not suitable for searching in AND-OR graph.	10M	1	L2
13	a) Explain Computable Functions and Predicates in knowledge representation. b) Explain the various issues in knowledge representation.	5M 5M	2	L2
OR				
14	a) Explain Matching with an example. b) Identify the differences between Procedural Versus Declarative Knowledge.	5M 5M	2	L2
15	a) Differentiate breadth first search with depth first search. b) Explain nonmonotonic reasoning detail.	5M 5M	3	L2
OR				

16	Explain about Depth first Search with an example.	10M	3	L2
17	a) Explain Boltzmann Learning in detail. b) Explain Learning with a Teacher and without a Teacher with an example.	5M 5M	4	L2
	OR			
18	a) Explain competitive Learning in detail. b) Explain Statistical nature of the Learning Process in neural networks.	5M 5M	4	L2
19	a) Explain Output Representation and Decision Rule in detail. b) Explain Hessian Matrix with an example.	5M 5M	5	L2
	OR			
20	Discuss the two types of perceptron in detail.	10M	5	L2