R20 Regulation *Subject code: 3P5GA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, April 2026

INTRODUCTION TO AI & NEURAL NETWORKS

(CSE(AI&ML))

Maximum Marks: 70 Date: 15.04.2026 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	List of un informed Search Techniques.	2M	1	L1
2	Write the Problem Characteristics.	2M	1	L1
3	Write in detail Representing Simple Facts in Logic.	2M	2	L1
4	Differentiate Representation and Mappings.	2M	2	L1
5	What is Neural Network?	2M	3	L1
6	Define Artificial Intelligence.	2M	3	L1
7	What is Statistical nature of the Learning Process?	2M	4	L1
8	Write about learning with teacher and learning without teacher.	2M	4	L1
9	Write Least Mean Square Algorithm.	2M	5	L1
10	Write the Hessian Matrix roles.	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Briefly write about the Constraint Satisfaction, Means ends Analysis in artificial intelligence.	10M	1	L2
	OR			
12	Discuss Hill Climbing technique in artificial intelligence.	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	Explain Forward versus Backward Reasoning with example.	10M	2	L2
15	Explain about Depth first Search with an example.	10M	3	L2
	OR			
16	a) What is neural network and explain it with human brain. b) Explain Neural network diagram with perceptron.	5M 5M	3	L2
17	a) Explain about Error- correction Learning in neural network. b) Explain supervised and un-supervised with examples.	5M 5M	4	L2

	OR			
18	a) Explain Learning task in neural network. b) Explain Hebbian Learning in detail.	5M 5M	4	L2
19	Explain Learning Curves in single perceptron in detail.	10M	5	L2
	OR			
20	a) Explain Learning Rate Annealing Techniques in detail. b) Explain Output Representation and Decision Rule in neural network.	5M	5	L2