R15

ANURAG Engineering College
(An Autonomous Institution)
III B.Tech I Semester Supplementary Examinations, Dec–2023/Jan-2024
ARTIFICIAL NEURAL NETWORKS
(ELECTRONICS AND COMMUNICATION ENGINEERING)

Time: 3 Hours   Max.Marks:75

Section – A (Short Answer type questions)   (25 Marks)
Answer All Questions

		Course Outcome	B.T Level	Marks
1.	What is adaptability in neural network learning?	CO1	L1	2M
2.	Write about error correction learning.	CO1	L2	3M
3.	What is a Bayes classifier.	CO2	L1	2M
4.	Define Rosenblatt's perceptron.	CO2	L1	3M
5.	What is generalization in neural networks?	CO3	L2	2M
6.	Write any three limitations of back propagation learning algorithm.	CO3	L2	3M
7.	What is vector quantization?	CO4	L1	2M
8.	What is adaptive process in SOMs?	CO4	L2	3M
9.	What are feedback systems.	CO5	L1	2M
10.	Write the definition stability of a dynamic system.	CO5	L2	3M

Section B (Essay Questions)
Answer all questions, each question carries equal marks.   (5 X 10M = 50M)

		Course Outcome	B.T Level	Marks
11.A)	What kind of properties and capabilities do neural networks offer? Explain.	CO1	L2	10M
	OR			
B)	Explain the significance of a Weight matrix in neural network learning?	CO1	L2	10M
12.A)	What is adaptive filtering problem? Explain it in detail.	CO2	L3	10M
	OR			
B)	Construct a multilayer neural network for solving XOR classification problem.	CO2	L3	10M
13.A)	Explain different pruning techniques applied in back propagation neural networks.	CO3	L2	10M
	OR			
B)	Write about different heuristics used for faster convergence in Back propagation learning.	CO3	L2	10M
14.A)	What is a self-organizing map (SOM). Write about it important components.	CO4	L3	10M
	OR			
B)	Explain how SOMs are useful in pattern classification with an example?	CO4	L3	10M
15.A)	Explain Lyapunov's stability theorem?	CO5	L2	10M
	OR			
B)	Explain Hopfield network model in detail.	CO5	L3	10M