Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. SEMESTER III–EXAMINATION – WINTER 2015

Subject code: 2730503 **Date: 04/12/2015**

Subject Name: ARTIFICIAL NEURAL NETWORKS

Time: 2:30 PM to 5:00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain Performance comparison of Computer and Biological Neural network	**07**
	(b)	Explain various features of ART.	**07**
Q.2	**(a)**	Explain pattern Classification Application used for Recognition Olympic games symbols.	**07**
	(b)	Explain Basic Learning Laws of Operation on Artificial Neural Network.	**07**
		OR	
	(b)	Discuss Back propagation Algorithm & Issues in Back propagation Learning	**07**
Q.3	**(a)**	Explain Pattern Recognition tasks for Competitive Learning Neural Network.	**07**
	(b)	Explain Activation Dynamics models.	**07**
		OR	
Q.3	**(a)**	Explain Architecture of feed forward network.	**07**
	(b)	Distinguish between pattern association, pattern classification & pattern mapping tasks.	**07**
Q.4	**(a)**	Explain Hopfield Model with its capacity.	**07**
	(b)	Explain Stability in Stochastic Networks.	**07**
		OR	
Q.4	**(a)**	What is Simulated Annealing? Explain with examples.	**07**
	(b)	Explain Architecture of Boltzmann Machine.	**07**
Q.5	**(a)**	Explain component of Competitive Learning Network.	**07**
	(b)	Explain Texture classification with segmentation.	**07**
		OR	
Q.5	**(a)**	Summarize Issues in Perceptron Learning	**07**
	(b)	Explain Artificial Neural Network Terminology.	**07**

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