

Code No: 136ER**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, November/December - 2020****ARTIFICIAL NEURAL NETWORKS****(Electrical and Electronics Engineering)****Time: 2 hours****Max. Marks: 75**

Answer any five questions
All questions carry equal marks

- 1.a) Briefly discuss about various neural network architectures.
b) How are the learning methods classified? Give examples. [8+7]
2. Derive the algorithm for back propagation network. [15]
- 3.a) What are the merits and demerits of Back Propagation Algorithm? Discuss.
b) Differentiate between supervised and unsupervised learning rule. [7+8]
4. With a neat sketch, explain SOM algorithm. [15]
- 5.a) What are the applications of Neuro dynamical models? Discuss.
b) Explain how to achieve the stability of equilibrium states. [8+7]
- 6.a) Explain the credit assignment problem in detail.
b) How neural networks can be viewed as directed graphs? Discuss. [7+8]
- 7.a) Explain the adaptive filtering problem in detail.
b) What is the relation between perceptron and Bayes classifier for a Gaussian environment? [6+9]
- 8.a) Why convergence is not guaranteed for the back propagation learning algorithm?
b) Discuss in detail about network pruning techniques. [8+7]

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