Code: 9A10805

R09

B.Tech IV Year II Semester (R09) Advanced Supplementary Examinations, July 2013

ARTIFICIAL NEURAL NETWORKS

(Common to E.Con.E and EIE)

Time: 3 hours Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1 (a) Explain the historical development of artificial neural networks.
(b) Explain the terms cell body, axon, synapse, dendrite and neuron. With reference to biological neural network.

2 Compare and contrast all learning laws.

3 (a) Discuss a few tasks that can be performed by a back propagation network.
(b) Write about the working of MS algorithm with a numerical example. Assume suitable input and weight matrix.

4 Discuss the working of single layer perceptron with relevant algorithm and compare them.

5 State and explain the EX-OR problem. Also explain how to overcome it.

6 Compare radial basis network with multiplayer perceptron. Give suitable examples.

7 (a) Explain mexican hat network with architecture.
(b) Write activation function used in mexican hat network.

8 (a) Explain how an image smoothing problem can be solved by principles of neural networks.
(b) What are important applications in speech area?

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