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R7

IV B.Tech I Semester (R07) Supplementary Examinations, May 2012
ARTIFICIAL NEURAL NETWORKS
(Electronics & Instrumentation Engineering)

Time: 3 hours Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

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1. (a) What are artificial neural networks? Where the neural networks are implemented?
   (b) Distinguish between supervised and unsupervised training.

2. (a) Discuss the requirements of learning laws.
   (b) What are the different types of Hebbian learning? Explain basic Hebbian learning.

3. (a) Discuss adaptive filtering technique in single layer perceptron with its algorithms and convergence concept.
   (b) Write about the working of least mean square algorithm with a numerical example. Assume suitable input and weight matrix.

4. (a) Explain Adaline architecture and write the applications.
   (b) Explain briefly about MRI algorithm.

5. Write short notes on the following:
   (a) Kohonen self organizing network.
   (b) Grossberg layer network.
   (c) Training phases of full CPN.

6. Write the following algorithm in associative memories:
   (a) Retrieval Algorithm.
   (b) Storage Algorithm.

7. (a) Explain briefly about Boltzmann Machine.
   (b) Write about continuos and discrete Hopfield networks.

8. Explain the difficulties in the solution of traveling salesman problem by a feedback neural network.

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