Code: R7420407

R7

B.Tech IV Year II Semester (R07) Supplementary Examinations March/April 2013

ARTIFICIAL NEURAL NETWORKS
(Electronics and Communication 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? What are their characteristics?
   (b) Explain the historical development of artificial neural networks.

2   Explain the training of artificial and neural networks.

3   Write the algorithm for least mean square. Explain the working principle of it.

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

5 (a) Compute the Hessian matrix and determine whether it is positive define for the function $E(x) = (X1 - X2)2 + (1 - X1)2$.
   (b) Discuss the network pruning techniques.

6 (a) Write about generalized radial basis networks.
   (b) Write approximation properties of radial basis function network.

7 (a) Explain briefly about hamming network.
   (b) What is the purpose of learning vector quantization?

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

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