

G 1760

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Eighth Semester

Branch : Computer Science and Engineering/Information Technology

CS 010 805 G02/IT 010 805 G05—NEURAL NETWORKS (Elective IV) (CS, IT)

(New Scheme—2010 Admission onwards)

[Regular/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. What is the difference between human intelligence and machine intelligence ?
2. What are multilayer perceptrons ?
3. What are the applications of Radial Basis Function networks ?
4. What are the various ways to realize competition in neural networks ?
5. What is pattern association ?

(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

6. Why we need pattern classification ?
7. Explain temporal stability.
8. How to train RBF networks ? Explain.
9. What is a counter propagation network ?
10. Give an example for hetero associative networks.

(5 × 5 = 25 marks)

Turn over



Part C

Answer all questions.

Each question carries 12 marks.

11. Compare the performance of a computer and that of a biological neural network in terms of speed of processing, size and complexity, storage, fault tolerance and control mechanism.

Or

12. Explain McCulloch-Pitts model of neuron.

13. Briefly explain Back propagation algorithm in detail.

Or

14. Derive the Back propagation algorithm for regression.

15. What is under fitting and over fitting ? Explain prevention mechanisms for the same.

Or

16. Explain learning with momentum and conjugate gradient learning.

17. Explain Maxnet fixed weight competitive networks.

Or

18. Explain the application and architecture of full counter propagation network.

19. Briefly explain the algorithm for hopfield networks.

Or

20. What is the purpose of using bidirectional associative memory ? Explain.

(5 × 12 = 60 mark

