

OCTOBER 2012

**P/ID 16117/
PIEB/KSB**

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL the questions.

1. (a) What is an artificial neuron? How this is analogous to a biological neuron? State the properties of single neuron.

Or

- (b) What is a classification model? How this is used for practical classification application?

2. (a) What is a rule based neural network? Describe.

Or

- (b) Describe constraint based neural network.

3. (a) What is learning? Discuss about perceptron.

Or

- (b) State the advantages of knowledge based approaches.

4. (a) What are the heuristics followed in NN?
Explain.

Or

- (b) What do you mean by symbolic methods?
How are they used?

5. (a) What is a hybrid model? Explain.

Or

- (b) What do you infer from spatio temporal NN?
Explain.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

6. Explain association model. Explain a neural network which uses this principle, and an application.
7. Describe the principle of self organization. Illustrate a network of this model.
8. Compare the technical issues concerned with supervised and unsupervised learnings.
9. Describe network training and revision. State and explain the implementation issues.

10. Describe differentiation and parallel models.
 11. Explain control networks. What type of applications can be realized with them? Discuss.
 12. Write an elaborate discussion on learning procedures. How are they employed in ANN?
 13. Write short notes on:
 - (a) Structures and sequences
 - (b) Decision tree based NN.
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