

Set No. 1

Set No. 2

Set No. 3

Code No: R4202A

R10**Set No. 4****IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2016****AI TECHNIQUES****(Electrical and Electronics Engineering)****Time: 3 hours****Max. Marks: 75****Answer any FIVE Questions****All Questions carry equal marks***********

- 1 a) Describe the performance comparison of Computer and Biological Neural network. [8]
b) Explain the methods of AI techniques. [7]
- 2 a) Explain the PERCEPTRON And ADALINE models of an artificial neuron. [8]
b) Discuss various types of neural network architectures. [7]
- 3 a) Explain the Delta learning rule for multi-perceptron layer. [8]
b) Explain the training algorithm used to train the back propagation network [7]
- 4 Discuss various methods of selecting chromosomes for parents to crossover. [15]
- 5 a) What is meant by cross over rate? Explain its importance in GA. [8]
b) How do you represent the even and odd number of cross sites in multi point cross over with neat schematic? [7]
- 6 a) Two fuzzy sets defined by $A = \{(x1,1) (x2,0.3)(x3,0.5)(x4,0.2)\}$ and $B = \{(x1,0.5) (x2,0.4)(x3,0.1)(x4,1)\}$ find
i) max ii) min iii) complement of A & B iv) power sets [8]
b) Discuss the properties of crisp sets and compare with fuzzy sets. [7]
- 7 Draw the block diagram of fuzzy logic system component and explain each block. [15]
- 8 Explain the applications of AI techniques in the following fields
a) Speed Control of dc and ac motors [8]
b) Economic load dispatch unit [7]