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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)**

M.Tech I Year I Semester Regular & Supplementary Examinations February 2018

SOFT COMPUTING TECHNIQUES

(Control Systems)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 X 12 =60 Marks)

UNIT-I

- 1 a. Explain about artificial neuron. 6M
b. Explain about the characteristics of artificial neural networks. 6M

OR

- 2 a. What are the types of neuron activations functions? 6M
b. What are the learning strategies for artificial neural networks? 6M

UNIT-II

- 3 a. What are the limitations of "Perceptron" model? Explain. 6M
b. Explain the architectural details and algorithm of "ADALINE" model 6M

OR

- 4 Explain the basic architecture and algorithm of discrete Hopfield networks. 12M

UNIT-III

- 5 Explain classical set operations in detail. 12M

OR

- 6 a. Differentiate between classical sets and fuzzy sets. 6M
b. Explain about the membership functions in fuzzysets 6M

UNIT-IV

- 7 Explain different methods of defuzzification 12M

OR

- 8 Explain working of Greg-Viot fuzzy cruise controller. 12M

UNIT-V

- 9 a. Differentiate genetic algorithm verses traditional algorithm. 6M
b. Describe the applications of genetic algorithm. 6M

OR

- 10 Explain different reproduction operators used in GA 12M

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