Reg. No: ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
M.Tech I Year I Semester (R16) Regular Examinations January 2017
NEURAL NETWORKS AND FUZZY LOGIC
(Power Electronics)
(For Students admitted in 2016 only)

Time: **3 hours**　　　　　　　　　　　　　　　　　　　　Max. Marks: **60**

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

UNIT-I

| Q.1 | a. | Explain about biological neuron. | 6M |
| | b. | Briefly explain about the characteristics of artificial neural networks. | 6M |

OR

| Q.2 | a. | What are the types of neuron activations functions? | 6M |
| | b. | Discuss about the supervised learning strategy. | 6M |

UNIT-II

| Q.3 | a. | What are the limitations of "Perceptron" model? Explain. | 6M |
| | b. | Explain about back propagation learning. | 6M |

OR

| Q.4 | | Explain Gradient descent method used in back propagation algorithm. | 12M |

UNIT-III

| Q.5 | | Explain the basic architecture and algorithm of discrete Hopfield networks. | 12M |

OR

| Q.6 | a. | Explain the concept of associative memory in ANN. | 6M |
| | b. | Describe hetero-associate network. | 6M |

UNIT-IV

| Q.7 | a. | Differentiate between classical sets and fuzzy sets. | 6M |
| | b. | What are the properties of fuzzy sets?. | 6M |

OR

| Q.8 | | Explain briefly about self-organizing feature maps | 12M |

UNIT-V

| Q.9 | | Explain about the development of rule base and decision making system. | 12M |

OR

| Q.10 | | Briefly explain about the artificial neural networks based short term load forecasting. | 12M |

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