Reg. No. : | | | | | | | | | | |

Question Paper Code: 39310

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Elective

Electrical and Electronics Engineering

01UEE910 - FUZZY LOGIC AND NEURAL NETWORKS

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Differentiate classical and fuzzy set.
2. Define boundaries of a membership function.
3. Define Defuzzification.
4. List the components of fuzzy logic controller.
5. Define Artificial Neural Network (ANN).
6. Define threshold.
7. What is the main purpose of Hop field network?
8. Write the applications of associative memory.
9. State the property of inverted pendulum neuro controller.
10. Sketch the basic block diagram of FLC in washing machine process.

PART - B (5 x 16 = 80 Marks)

11. (a) Define classical set and explain the functions of classical (crisp) sets with suitable examples. (16)

Or

(b) Describe the properties of crisp sets in fuzzy logic. (16)

12. (a) Explain different methods of fuzzification and defuzzification with example. (16)

Or

(b) With a neat sketch discuss the major components of fuzzy controller. (16)

13. (a) Explain single and multilayer feed forward network with example. (16)

Or

(b) Explain the back propagation algorithm training with any one example. (16)

14. (a) Sketch and explain the architecture of Bi-directional associative memories. (16)

Or

(b) Explain the recurrent networks in ANN. (16)

15. (a) Describe the fuzzy logic application in power systems automatic generation control. (16)

Or

(b) Explain how to implement the fuzzy controller in washing machine. And also write the algorithm. (16)

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