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

Question Paper Code: 31367

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

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. Compare artificial neural network and biological network.
6. Mention the different types of Learning rules.
7. State the need 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) Compare crisp Cartesian product with fuzzy Cartesian product. (16)

12. (a) Illustrate the fuzzy rule based system with suitable example. (16)

Or

(b) Explain the process of defuzzification. (16)

13. (a) Compare single layer feed forward network with multilayer feed forward network. (16)

Or

(b) Explain the Back propagation learning with its computations. (16)

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

Or

(b) Explain the Hopfield network and draw its architectures. (16)

15. (a) Illustrate the automatic generation control using fuzzy logic controllers. (16)

Or

(b) Explain the fuzzy set descriptions for the inverted pendulum problem. (16)

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