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Total No. of Pages : 02

Total No. of Questions : 8

M.Tech. (ECE) (2018 Batch) (Sem.–2)

NEURAL NETWORKS

Subject Code : MTEC-PE3C-18

M.Code : 76263

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWELVE marks.

Q1 a) Write the types of various activation functions used in neural network. Explain two of them in detail. [06]

b) What is learning? Explain the reinforcement learning with an example. [06]

Q2 a) Discuss the importance of back propagation algorithm. Explain one of the applications in detail. [06]

b) Draw and explain the working of McCulloch-Pitts model of neural network. [06]

Q3 a) What is content addressable memory? Discuss the difference between instar and outstar learning rule. [06]

b) Why are symmetrical weights and weights with no self connection important in discrete Hopfield network? [06]

Q4 a) What is perceptron? Explain perceptron learning rule algorithm in detail. [06]

b) Define Hamming distance. Explain the usefulness of Hamming distance in any artificial neural network based application with an example [06]

Q5 a) Differentiate a fuzzy set and crisp set based on their properties with an example. [06]

b) Define Fuzzification. Explain any one of the fuzzification scheme with an example. [06]

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Q6 a) State the basic principle of Sugeno inference technique with an example. [06]

b) Explain the significance of fuzzy t-norm and t-conorm operators with an example. [06]

Q7 a) Explain the concept of fuzzy uncertainty and fuzzy logic with suitable example. [06]

b) Draw and explain fuzzy-neuro system with neat block diagram and suitable example. [06]

Q8 Draw and explain the various steps required to implement genetic algorithm with the help of block diagram. Discuss each of them in detail. [12]

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NOTE : Disclosure of Identity by writing Mobile No. or making of passing request on any page of Answer sheet will lead to UMC against the Student.

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