

Printed Pages : 3



EOE041

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 199407

Roll No.

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B. Tech.

(SEM. IV) THEORY EXAMINATION, 2014-15
INTRODUCTION TO SOFT COMPUTING (NEURAL NETWORKS, FUZZY LOGIC & GENETIC ALGORITHM

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all the questions. All questions carry equal marks.

1. Attempt any four parts of the following : 5×4=20
- (a) Discuss the analogy between biological and artificial neuron.
 - (b) Discuss the various learning techniques in detail.
 - (c) Is it possible to use Artificial Intelligence in Neural network? If yes give the proper justification.
 - (d) Compare and contrast between the single layer. Feed Forward Network and Multilayer Feed Forward Network.

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2.	<p>Attempt any four parts of the following : 5×4=20</p> <p>(a) How will you train the Artificial Neural Network? Give proper justification for that.</p> <p>(b) Explain the factors which may affect the back propagation Neural Network.</p> <p>(c) What do you mean by Recurrent Networks? Illustrate the pros and cons of such network.</p> <p>(d) Briefly explain the Back propagation algorithm.</p> <p>(e) Illustrate the application areas of Neural Networks in detail.</p> <p>(f) Explain the effect of learning in Neural Network detail with the help of proper diagram.</p>		
3.	<p>Attempt any two parts of the following : 10×2=20</p> <p>(a) What is Fuzzy system? Compare and contrast between Fuzzy logic and crisp logic in detail with proper example.</p> <p>(b) Explain the following:</p> <p>(i) Application areas of fuzzy logic</p> <p>(ii) Linguistic variables</p>		
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			(c) What is the role of Defuzzification? Explain the types of Defuzzification in detail.
4.	<p>Attempt any two parts of the following : 10×2=20</p> <p>(a) What is Fuzzy Quantifiers? Compare and contrast between absolute and relative quantifiers. Also illustrate Fuzzy Controller. Define membership function in detail. Also define its roles and applications.</p> <p>(b) Explain the following.</p> <p>(i) The Role of Fuzziness in Artificial Intelligence</p> <p>(ii) Fuzzy Inference.</p>		
5.	<p>Attempt any two parts of the following : 10×2=20</p> <p>(a) Explain the creation of offspring's in detail with example. Also write down the working principle of Genetic algorithm and application of Genetic algorithm.</p> <p>(b) Draw the Evolutionary Cycle diagram and explain each component in detail.</p> <p>(c) Explain the following.</p> <p>(i) Fitness Evaluation</p> <p>(ii) Mutation.</p>		
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