1036

B.Tech. Examination, 2016

(Fourth Semester)

(CS, IT & EC Branches)

Paper - II

INTRODUCTION OF SOFT COMPUTING

Time Allowed : Three Hours

Maximum Marks : 100

Q. 1. (a) Explain Neuron, Nerve and Synapse Architecture model. **10**

(b) Explain genetic algorithms. Write the working procedure of GA ? **10**

Q. 2. (a) What is Fuzzy membership ? Explain in detail. **10**

(b) Write an about of Hetero-Associative memory techniques. **10**

Q. 3. (a) Explain Back Propagation learning algorithms in neural networks. **10**

(b) What do you understand by single layer and multilayer feed forward network in Neural Networks. **10**

Q. 4. (a) Explain the single layer perception model. Give its architecture. 10

(b) What is Neural Network learning technique, explain any one. 10

Q. 5. (a) Explain the Fuzzy logic and write the basic concept of Fuzzy logic. 10

(b) Explain the soft computing and write the application of soft computing. 10

Q. 6. (a) Write the difference between fuzzification & defuzzification. 10

(b) Write mutation in genetic algorithms. 10

Q. 7. (a) Discuss the generation cycle and its application. 10

(b) Short notes any two : 10

(i) Fuzz logic

(ii) Neural Network

(iii) Genetic operation

(iv) Crisp Relation

2450

B.Tech. Examination, 2015

(Fourth Semester)

(CS, IT & EC Branches)

Paper - II

INTRODUCTION OF SOFT COMPUTING

Time Allowed : Three Hours

Maximum Marks : 100

Note : Attempt any five questions. All questions carry equal marks.

Q. 1. (a) Explain neural Network Architectures and also explain convergence rule. **10**

(b) What do you mean by soft computing ? What are application of the soft computing. **10**

Q. 2. (a) Describe the recurrent network ? Discuss the application of recurrent network. **10**

(b) Compare and contrast between crisp variable and fuzzy variable. Give example. **10**

Q. 3. (a) Write the properties of "crisp-sets" and "Fuzzy sets". **10**

(b) Describe the Genetic algorithms ? What are the main features of Genetic algorithms. **10**

Q. 4. (a) Explain the single layer feed forward network and multilayer feed forward network with example. **10**

(b) What are Fuzzy Relations ? Explain relations properties and operations. **10**

Q. 5. (a) Discuss the generation cycle and its applications. **10**

(b) What are the different Fuzzy Relations ? Explain with suitable example. **10**

Q. 6. (a) What do you mean by back propagation learning algorithm ? Explain the limitation of back-propagation learning. **10**

(b) Explain in brief various method of defuzzification. **10**

Q. 7. (a) Explain neuron, nerve structure and synapse in neural network with neat diagram. **10**

(b) Define Artificial Neural Network and Biological Neural Network with suitable example. **10**

Q. 8. (a) Write working procedures of Genetic algorithms ? Also define the term mutation. **10**

(b) Explain the multilayer perception model ? Give its architecture. **10**

595

B. Tech. Examination, 2014

(Fourth Semester)

(CS, IT & EC Branches)

Paper - II

INTRODUCTION TO SOFT COMPUTING

Time Allowed : Three Hours

Maximum Marks : 100

Note : Attempt any five questions. All questions carry equal marks.

Q. 1. (a) Explain Neural Network architecture & various learning process. **10**

(b) What is Multi-layer perceptron ? Give its architecture. **10**

Q. 2. (a) Define Membership function in detail. Also define its role & application. **10**

(b) Define the following term : **10**

(i) Fuzzy to CRISP conversion

(ii) Properties of Fuzzy SETS

Q. 3. (a) Give the comparison between single layer feed forward network, Multi-layer feed forward network and recurrent network. 10

(b) What do you mean by back-propogation learning algorithm ? 10

Q. 4. (a) (i) What is difference between fuzzy set and crisp set. Explain. 10

(ii) Explain Fuzzy (Rule based) system with examples.

(b) Give the comparison between artificial Neural Network and Biological Neural Network. 10

Q. 5. (a) Write the basic concept of Genetic Algorithm. 10

(b) Discuss the operators of Genetic algorithm like reproduction, cross-over, mutation. 10

Q. 6. (a) What are the application of soft computing ? 10

(b) Discuss optimisation of travelling salesman problem using genetic algorithm. 10

Q. 7. (a) Artificial intelligence can be used in Neural Network or not. Justify your answer. 10

(b) What is activation function and what are its type ? 10

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B.Tech. Examination, 2013

Fourth Semester

(CS, IT & EC Branches)

Paper : II

INTRODUCTION TO SOFT COMPUTING

Time Allowed : Three Hours

Maximum Marks : 100

Note : Attempt any five question. All question carry equal marks.

Q. 1. (a) What is Neural Network ? Also list the benefits of Neural Network. **10**

(b) Construct a fully recurrent network with 5 Neuron, but no self feedback. **10**

Q. 2. (a) Explain model of Neuron with help of suitable diagram. **10**

(b) Discuss Neural Network view as directed graph, with suitable diagram. **10**

Q. 3. (a) A recurrent network has 3 source node, 2 hidden neuron and 4 o/p neuron. Construct an architectural graph that describe such a network. **10**

(b) What is Genetic Algorithm ? Also explain various genetic operator in detail. **10**

Q. 4. (a) Define following : **10**

(i) Fuzzy to grisp conversion

(ii) Properties of fuzzy set.

(b Explain the feature of membership function. **10**

Q. 5. (a) Write short note any two : 10

(i) Fuzzification

(ii) Clustering Algorithm

(iii) Soft Computing

(b) Unsupervised learning can be implemented in an off-line or on-line fashion. Discuss the physical implication of these two possibilities. 10

Q. 6. (a) Discuss BPA for multilayer perceptron and what happen 10

(i) If when neuron j is located in the output layer of the network

(ii) If when neuron j is located in hidden layer of the network

(b) A fully connected feed forward network has 10 source node, 3 hidden layer, one with 4 neuron and the other with 3 neuron and a single output neuron. Construct an architectural graph of this network. 10

Q. 7. (a) What is learning ? Explain learning without teacher with suitable diagram. 10

(b) Explain multilayer perceptron in detail. 10