Government College of Engineering, Aurangabad
(An Autonomous Institute of Government of Maharashtra)

M.E. (EC) Examination
End Semester Examination November 2016

ET-561: Soft Computing

Time: Three Hours   Max. Marks: 60

1 5 NOV 2016

"Verify the course code and check whether you have got the correct question paper"

N.B.: -

1. All questions are compulsory
2. Figures to the right indicate full marks
3. Assume suitable data if necessary and state it clearly
4. Use of non-programmable calculator is allowed

Q1   Attempt any two   12

A   What is the Fuzzy logic? Describe any one application of it.

B   What is de-fuzzification? Why is it needed? Explain with example.

C   Enlist and explain properties of Fuzzy sets.

Q2   Attempt any two

A   What is ANN? Compare artificial neural network with biological neural network.   12

B   What are different types of neural networks based on architecture? Explain.

C   Describe backpropagation algorithm. What are advantages and disadvantages of backpropagation algorithm..

Q3   Attempt any two   12

A   What are the applications of ANN? Where can we apply pattern classification method?

B   What is mean by learning? What is supervised and unsupervised learning? Give example of each.

C   Describe self organizing feature map. How to find change in weight value in SOM network?

Q4   Attempt any two

A   What is genetic Algorithm? Explain with flow chart.   12

B   Describe various operators of Genetic Algorithm.

C   What is Schema? Explain Schema theorem in detail.

Q5   Attempt any two   12

A   What tasks can be performed with feedback NN? Explain Hopfield net.

B   Define fuzzification and explain any two methods of it.

C   Explain with suitable example , Chaos Theory