Roll No ....

MCADD-801
M.C.A. (Integrated), VIII Semester
Examination, May 2022
Soft Computing

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

　　ii) All questions carry equal marks.

1. a) What is Soft Computing? Explain it is different from Hard Computing and its application.

   b) Explain Biological Neural network in terms of Axon, Synapse, Dendrites, Synaptic Gap.

2. a) What is Multi layer perception? Explain different types of activation functions.

   b) Draw a neat diagram of MADALINE and explain its working.

3. a) Explain Fuzzy Inference System (FIS).

   b) Elaborate membership functions, Fuzzy sets and Fuzzy if then rules.

4. a) Explain the architecture of Adaptive Resonance Theory (ART) with help of a schematic diagram.

   b) What is motivation for using Fuzzy logic in control applications? Discuss.

5. a) What are Rough sets? Differentiate between Rough and Fuzzy.

b) How Rough sets are used for Data Analysis?

6. a) Explain different types of mutation function in Genetic Algorithm.

b) Explain Fuzzy logic and Fuzzy quantifiers with example.

7. a) Explain backpropagation Training Algorithm in brief and discuss applications of it?

b) Describe Supervised learning.

8. Write short notes
   a) Hybrid Neuro Fuzzy Approach
   b) Boltzmann machine
   c) Associative memories
   d) Kohonen Maps

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