

(2 Hours)

[Total Marks: 60]

- N. B.: (1) All questions are compulsory.
(2) Make suitable assumptions wherever necessary and state the assumptions made.
(3) Answers to the same question must be written together.
(4) Numbers to the right indicate marks.
(5) Draw neat labelled diagrams wherever necessary.
(6) Use of Non-programmable calculators is allowed.

Q1. Attempt the two of the following.

12 Marks

- Write a short note on soft computing and write its applications.
- What is Fuzzy computing and write advantages of fuzzy system.
- Write short note associative Memory.
- Explain Probabilistic Reasoning and write Need of probabilistic reasoning in AI.

Q2. Attempt the two of the following.

12 Marks

- Explain the working of Biological neural network.
- Comparison between Human brain and Artificial Neural Network.
- Write a short note on McCulloch Pitts Neuron model.
- Explain the architecture and working of Radial basis function networks.

Q3. Attempt the two of the following.

12 marks

- Write a short note on Fixed Weight Competitive Nets.
- Explain the concept of Unsupervised Learning.
- Write a short note on Simulated Annealing Networks?
- Explain Architecture of a Convolutional Neural Network.

Q4. Attempt the two of the following.

12marks

- Comparison between Classical Sets and Fuzzy Sets.
- Enlist and explain any three classical set properties.
- What is Lambda-cuts for fuzzy set and Fuzzy relations?
- Write a short note on Defuzzification.

Q5. Attempt the two of the following.

12 marks

- Explain general genetic algorithm in details.
- Write operators in genetic algorithm.
- Write than note on Holland classifier systems.
- What the various types of crossover and mutation techniques?
