Total No. of Pages : 02

Total No. of Questions : 07

B.Sc. (Artificial Intelligence & Machine Learning) (Sem.–5) NEURAL NETWORK Subject Code : UGCA 1989 M.Code : 92424 Date of Examination : 19-12-22

Time: 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

- 1. Write briefly :
 - a) Characteristics of Neural Networks
 - b) Role of gradient descent algorithm
 - c) Need of activation functions
 - d) Representation of perception
 - e) Limitation of back propagation network
 - f) Features of associative memory networks
 - g) Significance of principal component analysis
 - h) Advantages of self organizing maps
 - i) Application of competitive learning
 - j) Example of non-linearly separable problem.

SECTION-B

- 2. Define neuron. Give details of the historical development of neural networks.
- 3. What are non-linear activation units? How artificial neural networks get trained?
- 4. Discuss the role of least square filters. Give details of perception convergence theorem.
- 5. Define interpolation. List the conditions for perfect recall in associative memory.
- 6. Differentiate between MLP and RBF. Name the application area where multi-layered perceptions are used.
- 7. How mexican hat networks are used for self organizing maps?

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.