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Roll No. :

C033535(033)

**B. Tech. (Fifth Semester) Examination,
Nov.-Dec. 2021**

AICTE (New Scheme)

(Information & Technology Engg. Branch)

ARTIFICIAL NEURAL NETWORK

Time Allowed : Three hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Part (a) of each question is compulsory and carrying 4 marks each. Attempt any two parts from (b), (c) and (d) of each questions & carries 8 marks each.

Unit-I

1. (a) What is Pattern Recognition?
(b) What is Neural Network? Explain its characteristics features.

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- (c) What are the different terminologies associated with neural networks.
- (d) Explain Neural Network Architecture in detail.

Unit-II

- 2. (a) What is activation function?
- (b) Differentiate between Activation Dynamics Models, Synaptic Dynamics Models.
- (c) Explain different learning models of ANN.
- (d) Explain in details Hebbian Learning Rule.

Unit-III

- 3. (a) Define Adaline Networks.
- (b) Explain some key points of MRI Algorithm & MRIT Algorithm.
- (c) What is Memory Networks? Explain Auto Associative Memory Network.
- (d) Explain Bi-Directional Associative Memory.

Unit-IV

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- 4. (a) What is Feedback Network?
- (b) Explain Discrete Hopfield Net-Architecture.
- (c) Explain in details Continuous Hopfield Net.
- (d) Explain some basic features and algorithm for Feed Forward Networks and Back Propagation Network.

Unit-V

- 5. (a) What is Image Processing?
- (b) Describe application of Neural Networks.
- (c) What is Bioinformatics? Why NN is important for bioinformatics.
- (d) Write short notes on : (any two)
 - (i) Pattern Recognition
 - (ii) Robotics
 - (iii) Forecasting