

SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

- Q.23 Write in brief about basic model of neural network. Also discuss various types of learning in neural networks. (CO1)
- Q.24 Write comparison between adaptive linear neuron, multiple adaptive linear neuron and back propagation networks. (CO3)
- Q.25 What is Robot Kinematics. Explain in detail the process identification networks for it. (CO4)

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Roll No.

3rd Sem.

**Branch : Artificial Intelligence & Machine Learning
Sub.: Neural Networks**

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

- Q.1 The Complexity of ANN is dependent upon _____? (CO1)
- a) Number of Neurons
 - b) Number of Nodes
 - c) Number of Anodes
 - d) Number of Layers
- Q.2 Example of a unsupervised feature map? (CO3)
- a) Text recognition
 - b) Voice recognition
 - c) Image recognition
 - d) None of the mentioned
- Q.3 Why do we need biological neural networks? (CO1)
- a) To solve tasks like machine vision & natural language processing
 - b) To apply heuristic search methods to find solutions of problem
 - c) To make smart human interactive & user friendly system
 - d) All of the mentioned

- Q.4 Which of the following is not a Machine Learning strategies in ANNs? (CO2)
- Unsupervised Learning
 - Reinforcement Learning
 - Supreme Learning
 - Supervised Learning
- Q.5 What is back propagation? (CO3)
- It is another name given to the curvy function in the perceptron.
 - It is the transmission of error back through the network to adjust the inputs.
 - It is the transmission of error back through the network to allow weights to be adjusted so that network can learn.
 - None of the above
- Q.6 What is the most direct application of neural network? (CO4)
- Vector quantization
 - Pattern mapping
 - Pattern classification
 - Control applications

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 In artificial neural network interconnected processing elements are called _____. (CO1)
- Q.8 On an average neural networks have higher computational rates than conventional computers. (True/False) (CO2)

- Q.9 Full form of RNN. (CO1)
- Q.10 The _____ is a single layer feed forward network. (CO2)
- Q.11 _____ is also called exploratory learning. (CO3)
- Q.12 Write two similarities between artificial neural network and biological neural network. (CO1)

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)

- Q.13 Discuss about supervised, unsupervised and reinforcement learning. (CO1)
- Q.14 Discuss the basic concept of artificial neural networks. (CO1)
- Q.15 Explain Feed Forward neural networks. (CO1)
- Q.16 Explain Delta Learning rule in brief. (CO2)
- Q.17 What is single layer perception network Discuss. (CO2)
- Q.18 Explain perception training algorithm for single output classes. (CO2)
- Q.19 Draw the architecture adaptive linear neuron network. (CO3)
- Q.20 Explain architecture of Back propagation network. (CO3)
- Q.21 Write the applications of neural networks in medical field. (CO4)
- Q.22 Write a short note on Robot Kinematics. (CO4)