

- Q.17 Discuss about architecture of supervised networks.
(CO3)
- Q.18 Explain perception training algorithm for single output classes.
(CO2)
- Q.19 Write comparison between adaptive linear neuron network and multiple adaptive linear neuron network.
(CO2)
- Q.20 Explain architecture of Back propagation network.
(CO1)
- Q.21 Write the applications of neural networks.
(CO4)
- Q.22 Discuss about character recognition networks.
(CO4)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $(2 \times 8 = 16)$

- Q.23 Define neural network. Discuss the basic model of neural network. Write the advantages of neural networks.
(CO1)
- Q.24 Discuss about multiple adaptive linear neuron networks in detail.
(CO3)
- Q.25 What is Robot kinematics. Explain in detail the process identification networks for it.
(CO4)

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3rd Sem / Artificial Intelligence & Machine Learning

Subject : Neural Networks

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory $(6 \times 1 = 6)$

- Q.1 Why do we need biological neural networks? (CO1)
- to solve tasks like machine vision & natural language processing
 - to apply heuristic search methods to find solutions of problem
 - to make smart human interactive & user friendly system
 - all of the mentioned
- Q.2 What is unsupervised learning ? (CO3)
- features of group explicitly stated
 - number of groups may be known
 - neither feature & nor number of group is known
 - none of the mentioned

(40)

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- Q.3 What is the full form of ANNs? (CO1)
- a) Artificial Neural Node
 - b) Ai Neural Networks
 - c) Artificial Neural Networks
 - d) Artificial Neural Numbers
- Q.4 Which of the following is not a Machine Learning Strategies in ANNs? (CO2)
- a) Unsupervised Learning
 - b) Reinforcement Learning
 - c) Supreme Learning
 - d) Supervised Learning
- Q.5 The network that involves backward links from output to the input and hidden layers is called _____ (CO3)
- a) Self organizing map
 - b) Perceptrons
 - c) Recurrent neural network
 - d) Multi layered perceptrons
- Q.6 Which of the following is an Applications of Neural Networks? (CO4)
- | | |
|----------------|---------------------|
| a) Automotive | b) Aerospace |
| c) Electronics | d) All of the above |

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 Automated vehicle is an example of _____ learning. (CO4)
- Q.9 Neural Networks are complex _____ with many parameters. (CO1)
- Q.10 On an average neural networks have higher computational rates than conventional computers. (True/False) (CO2)
- Q.11 _____ is also called exploratory learning. (CO3)
- Q.12 Write the two types of Robot kinematics. (CO4)

SECTION-C

- Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)
- Q.13 Write comparison between artificial and biological neural networks. (CO1)
- Q.14 Discuss about supervised, unsupervised and reinforcement learning. (CO3)
- Q.15 Explain Feed Forward neural networks. (CO2)
- Q.16 Write a short note on Hebbian learning rule. (CO2)