

CLASS: XII
ARTIFICIAL INTELLIGENCE (SUBJECT CODE - 843)
SESSION 2026-27

Unit 6: Understanding Neural Networks

1. A neural network is inspired by the working of:

- A. Heart
- B. Brain
- C. Kidney
- D. Lungs

2. The basic unit of the human nervous system is:

- A. Cell
- B. Neuron
- C. Tissue
- D. Organ

3. ANN stands for:

- A. Automated Neural Network
- B. Artificial Neural Network
- C. Advanced Neural Node
- D. Artificial Node Network

4. Which of the following is an application of neural networks?

- A. Spam filtering
- B. Email suggestions
- C. Chatbots
- D. All of these

5. Which company's search algorithm is a well-known example of neural networks?

- A. Microsoft
- B. Google
- C. IBM
- D. Intel

6. The first layer of a neural network is:

- A. Hidden Layer
- B. Output Layer
- C. Input Layer
- D. Activation Layer

7. The final predictions are generated by:

- A. Hidden Layer
- B. Input Layer
- C. Output Layer
- D. Bias Layer

8. Hidden layers are located:

- A. Before input layer
- B. Between input and output layers
- C. After output layer

D. Outside the network

Ans: B

9. Connections between neurons are assigned:

- A. Labels
- B. Thresholds
- C. Weights
- D. Classes

10. A neuron becomes active when:

- A. Output exceeds threshold
- B. Weight is zero
- C. Bias is removed
- D. Input is negative

11. A neural network with two or more hidden layers is called:

- A. FFNN
- B. ANN
- C. Deep Neural Network
- D. CNN

12. Deep Learning refers to:

- A. Learning databases
- B. Training deep neural networks
- C. Data mining
- D. Data storage

13. Neurons are also known as:

- A. Edges
- B. Nodes
- C. Biases
- D. Layers

14. Weights represent:

- A. Data size
- B. Connection strength
- C. Output value
- D. Learning rate

15. During training, neural networks learn:

- A. Hardware settings
- B. Optimal weights
- C. Operating systems
- D. Databases

16. Activation functions act as:

- A. Data collectors
- B. Decision makers
- C. Databases
- D. Sensors

17. Which is an activation function?

- A. ReLU
- B. Sigmoid
- C. Tanh
- D. All of these

18. Bias is:

- A. A constant added to weighted sum
- B. Output layer
- C. Input feature
- D. Learning rule

19. Bias helps in:

- A. Reducing data size
- B. Shifting activation function
- C. Storing data
- D. Deleting data

20. Neural networks learn by adjusting:

- A. Layers only
- B. Inputs only
- C. Weights and Biases
- D. Outputs only

21. Backpropagation is used to:

- A. Store data
- B. Update weights
- C. Collect data
- D. Display output

22. Forward propagation involves:

- A. Updating weights
- B. Data flowing from input to output
- C. Data cleaning
- D. Data storage

23. Backpropagation uses:

- A. Error/Loss
- B. Database
- C. Input data only
- D. Sensors

24. The formula $\sum w_i x_i + \text{bias}$ calculates:

- A. Weighted sum
- B. Dataset size
- C. Epoch
- D. Learning rate

25. In a feedforward network, data moves:

- A. Backward only
- B. In loops only
- C. Input to output only

D. Randomly

26. Which neural network was created by Frank Rosenblatt?

- A. CNN
- B. RNN
- C. Perceptron
- D. GAN

27. Perceptron is mainly useful for:

- A. Image generation
- B. Binary classification
- C. Speech recognition
- D. Translation

28. FFNN stands for:

- A. Fast Forward Neural Network
- B. Feed Forward Neural Network
- C. Fully Functional Neural Network
- D. Flexible Feed Network

29. FFNN is also called:

- A. MLP
- B. CNN
- C. GAN
- D. RNN

30. FFNN is widely used in:

- A. NLP
- B. Image Recognition
- C. Regression
- D. All of these

31. CNN stands for:

- A. Central Neural Network
- B. Convolutional Neural Network
- C. Computational Neural Node
- D. Complex Neural Network

32. CNNs are mainly used for:

- A. Computer Vision
- B. Database Design
- C. Networking
- D. Programming

33. Object detection is commonly performed using:

- A. CNN
- B. RNN
- C. GAN
- D. Perceptron

34. RNN stands for:

- A. Repeated Neural Network
- B. Recursive Neural Network
- C. Recurrent Neural Network
- D. Reliable Neural Network

35. RNNs are designed for:

- A. Sequential Data
- B. Static Images
- C. Tables only
- D. Databases

36. Which neural network uses feedback loops?

- A. CNN
- B. GAN
- C. RNN
- D. Perceptron

37. Machine translation commonly uses:

- A. CNN
- B. RNN
- C. GAN
- D. Perceptron

38. GAN consists of:

- A. One network
- B. Two networks
- C. Three networks
- D. Four networks

39. The two networks in GAN are:

- A. Input and Output
- B. Generator and Discriminator
- C. Hidden and Output
- D. Encoder and Decoder

40. GANs are widely used for:

- A. Image Generation
- B. Data Augmentation
- C. Style Transfer
- D. All of these

41. Neural networks improve:

- A. Efficiency
- B. Productivity
- C. Resource Allocation
- D. All of these

42. One concern regarding neural networks is:

- A. Data Privacy
- B. Algorithmic Bias
- C. Job Displacement

D. All of these

43. In TensorFlow, a loss function measures:

- A. Model accuracy only
- B. Difference between prediction and actual output
- C. Dataset size
- D. Learning rate

44. An optimizer function is used to:

- A. Increase loss
- B. Reduce loss
- C. Store data
- D. Delete data

45. Epoch means:

- A. One complete iteration through dataset
- B. Number of layers
- C. Number of neurons
- D. Dataset size

46. Learning Rate controls:

- A. Dataset size
- B. Speed of learning
- C. Number of outputs
- D. Number of classes

47. Regularization helps in:

- A. Increasing overfitting
- B. Reducing overfitting
- C. Increasing layers
- D. Data collection

48. Positive weights in TensorFlow Playground are shown in:

- A. Orange
- B. Blue
- C. Green
- D. Black

49. Which dataset in TensorFlow Playground is used for classification?

- A. XOR
- B. Circle
- C. Gaussian
- D. All of these

50. The main purpose of neural networks is to:

- A. Mimic human brain decision-making
- B. Store files
- C. Replace databases
- D. Create operating systems