

(FOR THE CANDIDATES ADMITTED

23UAI621

DURING THE ACADEMIC YEAR 2023 ONLY)

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : MAY 2026

B.Sc CS with AI & ML

MAXIMUM MARKS: 75

SEMESTER : VI

TIME : 3 HOURS

PART - III

23UAI621 – DEEP LEARNING

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

(K1)

1. Which application is most suitable for Deep Learning?
 - a. Simple arithmetic calculations
 - b. Sorting algorithms
 - c. Image and speech recognition
 - d. Database indexing
2. Which of the following supports distributed training in TensorFlow?
 - a. Static typing
 - b. TensorFlow architecture
 - c. Graph visualization
 - d. Placeholder mechanism
3. What is the main purpose of using filters in a CNN?
 - a. Increase image size
 - b. Extract features
 - c. Classify images
 - d. Normalize data
4. Neural Turing Machines combine neural networks with:_____
 - a. Reinforcement learning only
 - b. External memory
 - c. CNN layers
 - d. Clustering algorithms
5. Which element is NOT part of a Markov Decision Process (MDP)?
 - a. States
 - b. Actions
 - c. Rewards
 - d. Hidden layers

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. What is a neuron in a neural network?
7. What is a Session in TensorFlow?
8. What is a feature map?
9. Define Word2Vec.
10. What is a reward in RL?

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Explain the applications of Deep Learning.
(OR)
b) Describe the structure of a neural network.
12. a) Explain the components of TensorFlow.
(OR)
b) Explain the features of TensorFlow.
13. a) Explain the basic architecture of a CNN.
(OR)
b) Describe max pooling with an example.

(CONTD 2)

14. a) Explain the basic architecture of a Recurrent Neural Network.

(OR)

- b) List the applications of RNN.

15. a) Explain the basic components of Reinforcement Learning.

(OR)

- b) Explain Markov Decision Process (MDP).

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)

16. a) Explain Deep Learning and its advantages over traditional Machine Learning.

(OR)

- b) Discuss the biological inspiration and working of an artificial neuron.

17. a) Explain the architecture of TensorFlow.

(OR)

- b) Explain Variables, Operations, and Placeholders in TensorFlow.

18. a) Discuss max pooling and its advantages.

(OR)

- b) Explain applications of CNN in real-world scenarios.

19. a) Explain Recurrent Neural Networks in detail with advantages and limitations.

(OR)

- b) Describe LSTM architecture and working.

20. a) Explain Reinforcement Learning with its working and types.

(OR)

- b) Explain applications of Deep Learning in NLP and Robotics.

Ethical paper