DECEMBER 2022 **P/ID 17622/PCAE6**

Time : Three hours Maximum : 80 marks

PART A — ($10 \times 2 = 20$ marks)

Answer any TEN questions.

1. What is neural network? Mention its types.

2. What are the three components of the neural network?

3. Is K-means supervised or unsupervised?

4. Can neural networks be used for unsupervised learning?

5. What are the types of supervised learning?

6. What is meant by continuous learning in machine learning?

7. What are the similarities and differences between reinforcement learning and supervised learning?

8. Why Q-learning is used?

9. Does reinforcement learning use neural networks?

10. What is derivative data?

11. Q-learning is deep learning or not? Justify.

12. What is the best neural network model for temporal data?

PART B — (5 × 6 = 30 marks)

Answer any FIVE questions.

13. Explain briefly about Single — layer perceptron with a neat diagram.

14. With a neat sketch, discuss briefly about Recurrent neural networks.

15. Differentiate between decision tree and random forest.

16. List out the applications of neural network in industries.

17. Bring out the applications of artificial neural network and explain how it is used in day to activities of real life day.

18. Discuss in brief about symbolic artificial intelligence.

19. Elaborate on learning process of a neural network with a neat diagram.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Explain in detail about the architecture and working of Self Organizing Neural network.

21. Discuss in detail about Back propagation neural network.

22. What are the different types of neural networks used in Artificial intelligence and machine learning. Explain.

23. What is machine learning? Explain how symbolic approach can be applied to natural language processing.

24. What is long short — term memory? Illustrate it with necessary diagrams.

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