DECEMBER 2023 **P/ID 17622/PCAE6**

Time : Three hours Maximum : 80 marks

PART A — ($10 \times 2 = 20$ marks)

Answer any TEN questions.

1. What is the use of neural network?
2. How many basic layers are there in neural network?
3. What is inference mode in machine learning?
4. What is the goal of an optimization model?
5. What is supervised learning in neural network?
6. Is K-means supervised or unsupervised?
7. What is incremental learning in artificial neural network?
8. What are the different types of mathematical model?
9. Are neural networks heuristic?
10. What is a parallel neural network?
11. What are the structures of neural network?
12. What is knowledge based machine learning?

PART B — ($5 \times 6 = 30$ marks)

Answer any FIVE questions.

13. Write a brief note on decision tree model with a neat structure.

14. Which is the best optimization technique? Explain it with a neat structure.

15. Is neural network rule based? Explain.

16. What is reinforcement learning in neural network? Explain with a neat structure.

17. How mathematical model of ANN is developed? Explain.

18. What is hierarchical reinforcement learning? Explain with a neat structure.

19. Write short notes on the structure of single layer feed forward neural network with a neat structure.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

20. Explain in detail about associative neural network with a neat structure.

21. Discuss in detail about constraint based neural network with a neat structure.

22. Elaborate on perceptron neural network with a neat structure.

23. What is Neuro-fuzzy hybrid system? Explain with a neat structure.

24. What are recurrent neural networks? Discuss in detail with a neat structure.
