MAY 2023 **P/ID 17622/PCAE6**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. List out the components of neural network.

2. Write down the basics of neural networks?

3. What is reinforcement learning in neural network?

4. What are the major components of optimization?

5. Where is unsupervised learning used?

6. What are the types we have in supervised learning?

7. Is reinforcement learning incremental?

8. What is the importance of mathematical modeling?

9. What is heuristics in machine learning?

10. What are hybrid models in AI?

11. What is a sequence in neural network?

12. What are the different components of knowledge based system?

PART B — (5 × 6 = 30 marks)

Answer any FIVE questions.

13. Discuss in brief about Naive Bayes model with a neat structure.

14. What is the difference between Boltzmann and restricted Boltzmann machine enlighten with example?

15. How is AI related to neural networks? Explain.

16. What is learning in artificial neural network? Discuss with a neat structure.

17. Write a brief note on the steps involved in mathematical modeling.

18. How does a neural network works? Explain with a neat structure.

19. Discuss in brief about the structure of multilayer feed forward neural network with a neat structure.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. What is self-organizing map in Al? Explain in detail with a neat structure.

21. Elaborate in detail about statistical learning theory with a neat structure.

22. Bring out the applications of neural network in various fields.

23. Describe in detail about back propagation neural network with a neat structure.

24. What is delta learning rule? Explain with a neat structure.

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