LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – **COMPUTER SCIENCE**

SECOND SEMESTER – **APRIL 2022**

PCS 2602 – NEURAL NETWORKS

Date: 24-06-2022   Dept. No.   Max. : 100 Marks
Time: 09:00 AM - 12:00 NOON

Part – A

Answer all the Questions   10 x 2 = 20

1. What are the types of layers in Neural networks?

2. What are node properties?

3. Define statistical learning with an example.

4. What does cleavage rule do in AI?

5. Classify Inference Engineer.

6. State the CF-Based activation function.

7. Mention any four applications of Neural Networks.

8. What is RBCN ?

9. What is blackboard?

10. Define conceptual clustering.

Part – B

Answer all the Questions   5 x 8 = 40
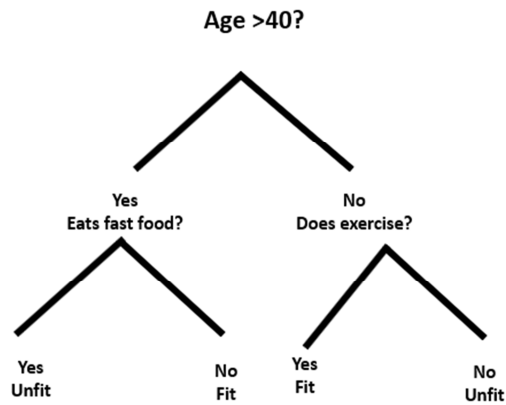
11. a.) Write about single layer perceptron and its learning model
                                    (Or)
    b.) Differentiate between Kohonen networks and Competitive Learning.

12. a.) Explain back propagation Neural Networks with suitable diagram
                                    (Or)
    b.) Describe KBCNN network training algorithm.

13. a.) Classify Incremental Learning
                                    (Or)
    b.) Briefly explain the steps in Mathematical modelling.

14. a.) Differentiate between Tree hierarchy and Linear hierarchy
                                    (Or)
    b.) Explain CLUSTER/2 Conceptual Clustering Algorithm.

15. a.) With suitable example, explain hybrid network approach
                                    (Or)
    b.) Describe about recurrent back propagation.

Part – C

16. a.) Explain in detail about Association models

   b.) Illustrate ID3 algorithm with suitable example.

17. a.) Explain in detail about Probabilistic Neural Networks

   b.) Describe parallel network models and their merits.

18. a.) Prepare a distributed representation for the receptors below:

   Unit A: (a, b, c) (d, e, f) (g, h, f)

   Unit B: (k, l, m) (o, p, q) (g, h, f)

   b.) Prepare a neural network based on the decision tree given below:

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