Register No.: …… Name: ……..

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER M.C.A DEGREE EXAMINATION (S), SEPT 2022

(2021 SCHEME)

Course Code: **21CA203-D**

Course Name: **Computational Intelligence**

Max. Marks: **60** **Duration: 3 Hours**

PART A

(Answer all questions. Each question carries 3 marks)

1. Write any three common myths about computational intelligence.
2. With the help of a neat conceptual diagram, explain biological neuron.
3. What is evolutionary programming?
4. Write a short note on genetic programming.
5. Explain perceptron.
6. Explain any three operations that neural networks are generally used for.
7. Write a short note on fuzzification.
8. List five steps in constructing fuzzy rule base.
9. Draw the relationship between the fuzzy system and the genetic algorithm in the evolutionary fuzzy rule system.
10. List any three tools of computational intelligence.

PART B

(Answer one full question from each module, each question carries 6 marks)

MODULE I

11. Explain the application areas of computational intelligence. (6)

OR

12. Write short notes on three different types of adaptations. (6)

MODULE II

13. Explain particle swarm optimization. (6)

OR

14. Explain finite state machine evolution for prediction. (6)

MODULE III

15. With a neat diagram, explain various neural network components. (6)

OR

16. Write short notes on preprocessing data and post-processing for neural networks. (6)

MODULE IV

17. Explain linguistic variables and linguistic hedges. (6)

OR

18. Write a note on paradoxes in fuzzy logic. (6)

MODULE V

19. Write the issues in computational intelligence implementations. (6)

OR

20. How can you apply computational intelligence in data mining? Explain. (6)

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