

BB582

M. Tech. EXAMINATION, 2020

(Second Semester)

(B Scheme)

(Re-appear Only)

CSE

CSE504B

COMPUTATIONAL INTELLIGENCE

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt any *Five* questions by selecting at least *one* question from each Unit.
Answer to the point.

Unit I

1. Write notes on the following : **15**
 - (a) Genetic Algorithm
 - (b) Evolutionary Strategy.

2. Explain the steps to optimize the given function using Genetic Algorithm : **15**
$$F(x) = 5x + 6 \text{ where } 0 \leq x \leq 32.$$

Unit II

3. What is optimization problem ? Explain Ant Colony Optimization algorithm in detail. **15**
4. Write notes on the following : **15**
 - (a) Co-evolution
 - (b) Multi-objective optimization.

Unit III

5. Explain the concept of fuzzification and defuzzification considering suitable example of your own. **15**
6. Explain the architecture of Hopfield Neural Network in detail. **15**

Unit IV

7. Draw the block diagram for basic neural classifier system and explain each block in detail. **15**
8. Explain the pattern recognition system in detail. **15**