Total No. of Questions : 7]

SEAT No. :

P3955

[Total No. of Pages : 1

[5462] - 679
M.E. (Computer Engineering)
Bio-Inspired Optimization Algorithms
(2017 Course) (Sem - I) (510102)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Q.No.7 is compulsory, solve any 5 from Q.No 1 to Q.No.6***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) What is natural computing? **[1]**

b) Write simulated annealing algorithm. **[4]**

c) What is positive feedback? List examples of positive feedback. **[3]**

Q2) a) Discuss selection and mutation of Evolutionary Programming **[4]**

b) Discuss selection and crossover of Evolutionary Strategies. **[4]**

Q3) a) Interpret the biological terminology into Ant colony Optimization and Ant Clustering Algorithm. **[4]**

b) Write Ant clustering algorithm. **[4]**

Q4) a) Write pseudocode of flower pollination algorithm and discuss idealized rules of flower pollination algorithm. **[4]**

b) Discuss self tuning framework and self tuning of firefly algorithm **[4]**

Q5) a) Interpret the immunological terminology into the computational domain of AIS. **[4]**

b) Illustrate procedure to generate antibodies from gene libraries. **[4]**

Q6) a) Discuss architecture of Framstick. **[4]**

b) Illustrate boid flocking. **[4]**

Q7) a) What is artificial life? What are the goals of artificial life. **[4]**

b) Discuss ant system for Travelling salesman problem. **[6]**

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