

M.Sc. (MATHEMATICS WITH APPLICATIONS IN COMPUTER SCIENCE)
M.Sc. (MACS)

Term-End Practical Examination

June, 2018

00090

MMTE-007(P) : SOFT COMPUTING AND ITS APPLICATIONS

Time : $1\frac{1}{2}$ Hours

Maximum Marks : 40

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- Note :** (i) *This question paper has two questions worth 30 marks.*
(ii) *Remaining 10 marks are for viva-voce.*
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1. Write a program in 'C' language to write the children solution of a Travelling Salesman Problem (TSP) consisting of n cities using position-based crossover in genetic algorithm.

Also, test your program to find the children solution of the following parent problem :

Parent 1 :	1	2	3	4	5	6	7	8	9	10
Parent 2 :	2	1	4	3	6	5	8	7	10	9

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2. Write a program in 'C' language to implement the back propagation algorithm. Test your program to modify weights by taking any suitable initial vectors. Also show step-by-step output to input, hidden and output neurons as well as errors. 15