

00185 M.Sc. (MATHEMATICS WITH APPLICATIONS
IN COMPUTER SCIENCE)

M.Sc. (MACS)

Term-End Practical Examination

June, 2013

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

Time : 1½ hours

Maximum Marks : 40

Note : This question paper has two questions worth 30 marks.
Remaining 10 marks are for viva-voce.

1. Write a program in 'C' language to implement the back propagation algorithm. Test your program to modify weights for the following inputs and outputs : 12+6=18

Input		Output
I ₁	I ₂	0
0.3	- 0.5	0.1
0.2	0.5	0.3
0.4	- 0.1	0.2

The initial weights are given below :

$$[W]^{\circ} = \begin{bmatrix} 0.1 \\ -0.4 \end{bmatrix} \text{ and } [V]^{\circ} = \begin{bmatrix} 0.2 & 0.4 \\ -0.1 & 0.2 \end{bmatrix}$$

2. Write a program in 'C' language to write the children solution of a genetic algorithm to solve a TSP consisting of n cities using cyclic crossover. Also, test your program for the following two parents :

8+4=12

Parent 1 : A B C D E F G H

Parent 2 : C A D B F H E G
