M. SC. (MATHEMATICS WITH APPLICATIONS IN COMPUTER SCIENCE)
[M. Sc. (MACS)]
Term-End Practical Examination
June, 2025

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

Time : 1½ Hours   *Maximum Marks : 40*

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

1. Write a program is 'C' language to implement the FCM algorithm. Also, test it to find the final fuzzy partition and cluster centres for the following data :   15

	f_1	f_2
x_1	10	2
x_2	15	4

x_3	20	6
x_4	25	5
x_5	30	8

The initial values are : $V_1 = (1, 1)$, $V_2 = (2, 2)$ with $c = m = 1$.

2. Write a 'C' program to write the children solution of a TSP using crossover # 1. Test it for the following : 15

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

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