No. of Printed Pages : 2

MMT-001 (P)

00030

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

Term-End Practical Examination

June, 2016

MMT-001 (P) : PROGRAMMING AND DATA STRUCTURES

Time : 2 hours *Maximum Marks : 50*

Note : *There are **two** questions in this paper, totalling **40** marks. Answer both of them. Remaining **10** marks are for **Viva-Voce**.*

---

1. Write a program in 'C' that computes the value of $\tan^{-1}x$ using the power series expansion **15**

$$x - \frac{x^3}{3} + \frac{x^5}{5} - \text{.....}$$

The number of terms and value of 'x' will be input to the program from keyboard.

2. Write a program in 'C' for implementation of a single linked list of name and age of different persons and also do the following by using one function each for each task : **25**

(a) The linked list needs to be sorted always.

(b) It should accept a person's name and age and insert the node at right position in the list so that it remains sorted after insertion. The list should be sorted on name and then on age.

Make necessary assumptions.
