10. (a) Explain the following concept :

    (i) Pointer to structure

    (ii) Pointer and function.   8

(b) Write a program to read the file line by line ?   4

(c) Explain the following function :

    (1) ftell ( )

    (2) rewind ( )

    (3) fseek ( )

    (4) fscanf ( ).   4

M.C.M. Semester—I Examination

PROGRAMMING METHODOLOGY

Paper—1 MCM 2

Time : Three Hours]   [Maximum Marks : 80

Note :— (1) **ALL** questions are compulsory.

    (2) Use suitable data wherever necessary.

1. (a) Explain the Datatypes in C.   6

   (b) Write the syntax of printf ( ) and scanf ( ) with example.   6

   (c) What is C ? Explain the structure of C program.   4

OR

2. (a) What is operator ? Explain different types of operator.   6

   (b) What is variable ? How to assign value to variable ?   4

   (c) What is C Tokens ?   6

3. (a) Write a program to print day of week using Switch. 6

(b) Explain while loop with syntax and example. 4

(c) Print following output :

```
*
*  *
*  *  *
*  *  *  * [using nested for loop] 6
```

OR

4. (a) Explain looping statements. 8

(b) Write a program to print name, roll number, total, percentage of grade of student using else — if ladder. 8

5. (a) What is array ? Explain two dimensional array with example. 8

(b) Write a program to compare two string using strcmp ( ). 4

(c) What is string ? How to declare and initialize string variable ? 4

OR

6. (a) Write a program for addition of two matrix. 6

(b) Explain the concept of one dimensional array with example. 6

(c) Write a program to print greatest among array element. 4

7. (a) Explain the concept of structure within structure with example. 6

(b) Explain call by value with example. 6

(c) What is function ? Explain function with no argument and no return value. 4

OR

8. (a) Explain the difference between structure and union. 6

(b) Explain the concept of Recursion with example. 6

(c) What is scope and life time of variables in function ? 4

9. (a) Write the syntax of fopen ( ). Describe the various modes for opening a file. 8

(b) What is pointer ? How to declare and initialise pointer variable ? Explain with example. 8

OR