

Roll No.

Total No. of Questions : 09]

AIM LIBRARY

Total No. of Pages : 02

MCA (Sem. - 1st)

PROGRAMMING IN C

SUBJECT CODE : MCA - 102

Paper ID : [B0102]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Attempt any one question from each Sections - A, B, C & D.
- 2) Section - B is Compulsory.
- 3) Use of Non-programmable Scientific Calculator is allowed.

Section - A

(1 × 10 = 10)

- Q1) Can we store integer values and floating point values in the same array? If yes, how? If not, why not?
- Q2) Write a program to generate the Fibonacci series.
0 1 1 2 3 5 8..... upto n terms.

Section - B

(1 × 10 = 10)

- Q3) What are the different ways to pass a structure to a function? How do functions help to reduce the program size?
- Q4) Differentiate between user defined functions and library defined functions? Write a program to multiply two matrices of the order 3x3.

Section - C

(1 × 10 = 10)

- Q5) Write a program to copy the contents of one file to another. Making use of command line arguments, get the name of both the files from the user.
- Q6) Write a program to swap two variables without using third variable.

Section - D

(1 × 10 = 10)

Q7) Differentiate between :

- (a) Iteration and Recursion.
- (b) Call by value and Call by reference.

Q8) Write a program that sorts an array using bubble sort method.

Section - E

(10 × 2 = 20)

Q9)

- a) What is the time complexity of bubble sort?
- b) What is difference between assignment operator(=) and equality operator(==)?
- c) How many steps will it take to sort following sequence using selection sort : 8, 17, 5, 10, 12, 11, 87, 56, 29, 91
- d) How many steps will it take to sort following sequence using linear sort: 8, 17, 5, 10, 12, 11, 87, 56, 29, 91
- e) What is the size consumed by following pointer variables: int *i; float *p;
- f) What are the major features of structured languages?
- g) What is the use of command line arguments?
- h) What is the difference between an algorithm and a flowchart?
- i) What is the difference between high level and a low level language?
- j) Consider a pointer declaration int i=5, *p; p= &i;
Is p--; a valid statement, justify.

