PROGRAMMING USING C

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer question No. 1 and any *six* from the rest.

1. (a) What is a structured program ?

   (b) What is unary operator ? Give example.

   (c) List four characteristics of an algorithm.

   (d) Why we use union ?

   (e) List the 3 basic requirements of a loop
   statement.   2×5=10

2. (a) What are the built in data types in C ?   1

   (b) Differentiate :   9
   (i) While and do-while
   (ii) Relational operator and logical operator
   (iii) Array and structure.

[Turn over

3. (a) What will be the output of following program segment ?   3

    for (i=4; i< 10; i = i + 3)
        if (i % 2==0)
            printf ("AEI\n");

(b) Write a C program to find the sum of following series :   5

    1 + 6 + 11 + 16 + 21 + 26 + 31 + 36 + 41

(c) What is pointer ?   2

4. (a) Differentiate between global and local variable.   3

(b) Write a C program to find difference between simple interest and compound interest.   7

5. (a) What is null string ? Explain the following string handling functions with syntax.

    (i) strlen( )

    (ii) strcpy( )

    (iii) strcmp( )   1+3=4

(b) Write a C program to check whether a number is prime or not.   6

6. Write a C program to find first and second highest marks from a given set of marks. 10

7. Write a C program to multiply two matrices. 10

8. What is file pointer ? Explain different modes of opening a file. 2+8=10

9. Write a C program
   (a) to declare a structure with following fields. Roll No, name, admission fee. 3

   (b) to create a file named std.dat and store any five student records. 7

10. Write short notes on any *two* : 5×2=10
    (a) malloc and calloc
    (b) formal and actual parameter
    (c) pass by value and pass by reference.