Total No. of printed pages = 3

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 *four* from the rest.

1. (a) State true or false.   5×1=5

    (i) It is not necessary to make same number of arguments in formal parameter compared to actual parameter.

    (ii) If we write printf() statement in capital letter, even then the compiler understand it.

    (iii) A global variable can be accesses from any function.

    (iv) &marks [0] indicates the base address of the array marks [ ].

    (v) Example of a derived data type is float.

[Turn over

(b) Short questions :   5×1=5

(i) What is a nested-if statement ?

(ii) What is a header file?

(iii) What do you understand by user-defined function ?

(iv) State the difference between %c and %s.

(v) Why is C called a structured language ?

2. (a) Define algorithm. Also list the characteristics of an algorithm.   5

(b) Write an algorithm to read a number and find the sum of digits of the number.   6

(c) What is a flowchart ? Write down the symbols used in a flowchart.   4

3. (a) Write a C program to input *n* numbers, and find the count of odd and even numbers.   8

(b) Differentiate between global and local variable.   7

4. (a) Write a C program to find the roots of a quadratic equation.   10

(b) Differentiate between structure and union.

5

5. (a) Explain the use of break and continue statement. 3

(b) Differentiate between "while" and "do .... while" statements. 3

(c) Create a structure for keeping the following date – playerid, player_name, innings_played, total_run. Enter 11 such records and display them. 6

(d) What do you mean by call-by-value and call-by-reference. 3

6. (a) What is an address variable ? Explain how "malloc" function can allocate memory of n integers. 7

(b) Write a C program to find the length of a string without using function. 8

7. (a) Differentiate between Structure and Union. 5

(b) Write a C program to enter records of n students (roll no, name, marks) and display the name of the student who secured marks less than 30. 10