23-24

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Paper Code : BCAC102 Programming for Problem Solving through C
UPID : 1000081

Time Allotted : 3 Hours

Full Marks :70

The Figures in the margin indicate full marks.
Candidate are required to give their answers in their own words as far as practicable

Group-A (Very Short Answer Type Question)

[1 x 10 = 10]

1. Answer *any ten* of the following :

   (I)   scanf() is a predefined function in _____ header file.

   (II) How many times will the following loop execute?
         for(j = 1; j <= 10; j = j-1)

   (III) What is the full form of ANSI?

   (IV) Library function getch() belongs to which header file?

   (V)   int my_num = 100,000; is valid C expression? (True/False)

   (VI) C preprocessor are specified with _____ symbol.

   (VII) Character constants should be enclosed between _____

   (VIII) How to declare string in C?

   (IX) The printf() function retunes which value when an error occurs?

   (X)   What value strcmp() function returns when two strings are the same?

   (XI) The declaration **float *a[5];** is an array of pointers (True/False)

   (XII) Maximum number of elements in the array declaration int a[5][8] is _____

Group-B (Short Answer Type Question)

Answer *any three* of the following :   [5 x 3 = 15]

2. Describe the difference between = and == symbols in C programming with example?   [5]

3. What is an array? What are the different types of arrays. Show with example.   [5]

4. What is the general form of function in C? Explain.   [5]

5. What is loader and linker? Explain   [5]

6. What is Preprocessor? Explain.   [5]

Group-C (Long Answer Type Question)

Answer *any three* of the following :   [15 x 3 = 45]

7. (a) Why C is called a mid-level programming language?   [3]

   (b) Write a flowchart to check a given age is adult or minor.   [5]

   (c) Write a C Program to accept 5 numbers and print highest and lowest number among them.   [7]

8. (a) Write a C program to determine whether a given number is prime or not.   [6]

   (b) What is Arithmetic operators in C? Write with example.   [3]

   (c) Compare and contrast while loop and do while loop in C.   [6]

9. (a) Differentiate between calloc() and malloc()   [3]

   (b) What is the difference between direct and indirect recursion?   [3]

   (c) Add two numbers using function.   [ ]

   (d) Explain pointers in C language? What is NULL pointer?   [4]

10. (a) What is ternary operator. Write with example.   [5]

    (b) Write a C Program to find greatest number among given three number   [6]

    (c) Write C program to demonstrate relational operators?   [4]

11. (a) Write a program in C to check a given character is vowel or consonant.   [5]

    (b) Write programming to calculate Gross Salary. If salary is greater than 10000, DA is 10% of salary and HRA is 5%. otherwise DA is 5% and HRA is 3%   [4]

    (c) Write a program in C to read from a file and print it in the console.   [6]