

CS/BCA(C)/ODD/SEM-1/1000081/2023-2024/1167



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

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. Answer any ten of the following :

[1 × 10 = 10]

- (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 returns 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 × 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 × 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. [5]
(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]

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