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(21222)  
B.C.A.-I Sem.

(Printed Pages 3)  
Roll No. ....

**18002**

**B.C.A. Examination, Dec.-2022**  
**Programming Principles and Algorithm**  
**(BCA-102)**

*Time : Three Hours / [Maximum Marks : 75*

**Note :** Attempt questions from **all** sections  
as per instructions

**Section-A**

**Note :** Attempt **all** questions. Each question  
carries **three** marks.  $3 \times 5 = 15$

1. Explain the structure of 'C' programming with example.
2. What is the need of data type in programming? Explain.
3. What is syntax and usage of Puchar ()?
4. Define Recursion. Explain with the help of example?

**P.T.O.**

5. What is the use of getch () and getchar () function in C language?

### Section-B

**Note :** Attempt any **two** questions. Each question carries **7.5** marks.

$$2 \times 7.5 = 15$$

1. Explain the time and space complexity.
2. Explain call by value and call by reference with example.
3. What is function? Explain function definition with suitable examples.

### Section-C

**Note :** Attempt any **three** questions. Each question carries **15** marks.  $3 \times 15 = 45$

1. Explain the use of break, continue and goto statement in looping.

2. Write short note on:

- (a) Loops in C
- (b) If statement
- (c) Higher level language
- (d) Compiler
- (e) Preprocessor directives

3. (a) Define algorithm. Explain characteristics of algorithm.

- (b) Write an algorithm to check number is palindrome or not.

4. What is Operator? Explain the different types of operator in C.

5. (a) Write a 'C' program to check whether the given number is Armstrong or not.

- (b) Write a 'C' program to calculate factorial of a number.