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(Printed Pages 4)

(21223)

Roll No.

BCA-I Sem.

18002

B.C.A. Examination, Dec.-2023

PROGRAMMING PRINCIPLES AND

ALGORITHM

(BCA-102)

Time : Three Hours / [Maximum Marks : 75

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

Section-A

(Very Short Answer Type Questions)

Note : Attempt **all** questions. Each question carries **3** marks. Very short answer is required **not** exceeding 75 words.

$3 \times 5 = 15$

1. ✓ What is compiler?

P.T.O.

2. ✗ What is Actual Parameter?

3. ✓ Define Recursion?

4. ✓ Explain any two problem solving techniques.

5. ✗ What do you mean by primitive and non primitive data types.

Section-B

(Short Answer Type Questions)

Note : Attempt any **two** questions out of the following three questions. Each question carries 7.5 marks. Short answer is required not exceeding 200 words.

$2 \times 7.5 = 15$

1. ✓ What is loop? How can do.... while loop vary from while loop.

2. ✓ Explain if.....else with example.

3. Differentiate between call by value and call by reference with the help of example.

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Section-C

(Long Answer Type Questions)

Note : Attempt any **three** questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. $3 \times 15 = 45$

1. Distinguish between break and continue statement.
2. (a) Explain static and register storage class with example.
(b) What are the advantages of C language?
3. (a) Write a 'C' program to check whether the given number is prime or not.
(b) Write a 'C' program to calculate Fibonacci series.

4. Differentiate between flowchart and algorithm. Write an algorithm to compute the Sum of a digits.
5. Write the asymptotic notations used for best case, average case and worst case analysis of algorithms?