उत्तर बंग

विश्वविद्यालय

'समानो मन्त्रः समितिः समानी'

## UNIVERSITY OF NORTH BENGAL
BCA Major 1st Semester Examination, 2024

## BCAPMAJ101-BACHELOR OF COMPUTER APPLICATION

### COMPUTER FUNDAMENTALS

Time Allotted: 2 Hours 30 Minutes                                    Full Marks: 60

*The figures in the margin indicate full marks.*

### GROUP-A

**Answer any *four* questions from the following**                    3×4 = 12

1. Define Computer. Explain different characteristics of a computer.

2. Draw and explain the block diagram of a Computer.

3. What are CPU and ALU?

4. Explain BIOS.

5. Differentiate between RAM and ROM.

6. Explain System software and Application software.

### GROUP-B

**Answer any *four* questions from the following**                    6×4 = 24

7. Explain input /output devices in detail.

8. What is a primary storage? Explain.

9. Explain EPROM and EEPROM.

10. Discuss MICR.

11. Explain space complexity.

12. Discuss different types of symbols used in a flowchart.

### GROUP-C

**Answer any *two* questions from the following**                    12×2 = 24

13. Explain asymptotic notations with suitable graphical representations.

14. Discuss structured programming.

15. Explain the generations of computers with examples.

16. Define an algorithm and discuss its essential features.

——×——

**UNIVERSITY OF NORTH BENGAL**

BCA Major 1st Semester Examination, 2024

## BCAPMAJ102-BACHELOR OF COMPUTER APPLICATION

### PROGRAMMING FUNDAMENTALS USING C

Time Allotted: 2 Hours 30 Minutes                                    Full Marks: 60

*The figures in the margin indicate full marks.*

### GROUP-A

#### Answer any *four* questions from the following                $3 \times 4 = 12$

1.  What is a variable? Write the rules of naming a variable.
2.  Convert the following mathematical expressions into C expressions.

    (i)  $\dfrac{x}{b+c} + \dfrac{y}{b-c}$           (ii)  $r = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

3.  Discuss break and continue statement in C program.
4.  Write a C program to find the area of a rectangle.
5.  What is a header file? What are its uses?
6.  Explain implicit and explicit type conversion with example.

### GROUP-B

#### Answer any *four* questions from the following                $6 \times 4 = 24$

7.  Explain any three string handling functions in C.
8.  What is recursion? Write a program in C to compute factorial of a number using recursion.
9.  What is function? Discuss different types of functions with example.
10. Discuss actual and formal parameters with example.
11. Explain switch statement with syntax and example.
12. What is structure? Explain the syntax of structure declaration with example.

### GROUP-C

#### Answer any *two* questions from the following                $12 \times 2 = 24$

13. Discuss various types of loops in C language with example.
14. Discuss various types of operators used in C language with example.
15. What is file? Write a C program to copy the content of one file into another.
16. Discuss different types of Control statements available in C programming with suitable example.

——×——