

**2022**

**M.Sc.**

**2nd Semester Examination**

**COMPUTER SCIENCE**

**PAPER—COS-204 (CBCS)**

*Full Marks : 50*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

**COS-204 MODULE 1**  
**(COMPUTER FUNDAMENTALS)**

**Group - A**

Answer any *two* questions.

2×2

1. Define Pseudo code.

*(Turn Over)*

2. What is the full form of ASCII and EBCDIC?
3. How a signed integer can be identified whether it is positive or negative?
4. How stack is different from queue where both are linear data structure?

### Group - B

Answer any *two* questions. 2×4

5. Describe flowchart along with its different symbols.
6. Draw a flowchart that finds the sum of first 100 integers.
7. What will be the 7-bit representation of the string 'COS204M1'?
8. Convert:  $(329)_{10} \rightarrow (?)_2$  and  $(10110111)_2 \rightarrow (?)_{10}$

### Group - C

Answer any *one* questions. 1×8

9. What is the advantage of linked list over array? What is the difference between top-down and bottom-up approach of programming? Which system software is required to translate an Assembly Language to Machine Level Language?

3+3+2

10. Describe divide and conquer approach of programming. What is modular programming?

4+4

[Internal assessment - 5]

## COS-204 MODULE 2

### (PROGRAMMING CONCEPTS)

#### Group - A

Answer any *two* questions. 2×2

1. Define identifiers in a C language. Give some examples.
2. What is data type? What are the data types used in C language?
3. What is array?
4. What is pointer?

#### Group - B

Answer any *two* questions. 2×4

5. Describe conditional operator with proper example.
6. What is prefix and postfix increment/decrement? How these work explain with an example?

7. Explain for loop with proper diagram.
8. What is user-define function? What are the steps to use user-define function in a program?

**Group - C**

Answer any *one* questions. 1×8

9. Write a C program to display Fibonacci series up to a given limit.

Write a C program to check wheather a number is palindrome or not. 4+4

10. What is 2D array?

Write a C program to perform matrix multiplication using 2D array. 2+6

*[Internal assessment - 5]*

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