This question paper contains **3** printed pages]

ND—03—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc (CS) (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-301

(Object Oriented Programming)

(Wednesday, 29-11-2023) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions carry equal marks.

(*ii*) Figures to the right indicate full marks.

1. Attempt any *five* of the following : 15

(*a*) Explain applications of OOPs.

(*b*) Explain the concept of reference variable.

(*c*) Explain concept of static member function.

(*d*) Explain the use of destructor.

P.T.O.

(*e*) Explain various data types used in C++.

(*f*) Explain structure of C++ program with example.

(*g*) Write a program in C++ for addition and subtraction of two numbers.

2. Attempt any *three* of the following : 15

(*a*) Explain how to overload a function in C++.

(*b*) Write a program in C++ to describe concept of function overloading.

(*c*) Discuss concept of function prototyping.

(*d*) Write a C++ program to describe concept of class and object.

(*e*) Explain concept of parameterized constructor.

3. Attempt any *three* of the following : 15

(*a*) Explain concept of default argument with example.

(*b*) Explain while statement used in C++ with syntax and example.

(*c*) Write a C++ program to describe Hierarchical inheritance.

(*d*) What are the different stream classes used for file handling in C++.

(*e*) Write a program in C++ to describe concept of visibility modes.

4. Attempt any *three* of the following : 15

(*a*) Explain the concept of class and object in detail.

(*b*) Explain the concept of this pointer.

(*c*) Write a C++ program to describe concept of Binary operator overloading.

(*d*) Explain concept of template in detail.

(*e*) Write a C++ program to describe concept of do-while loop.

5. Write short notes on any *three* of the following : 15

(*a*) Virtual base class

(*b*) Friend function

(*c*) Pure virtual function

(*d*) Command line arguments

(*e*) Inline function.