B.Sc DEGREE END SEMESTER EXAMINATION : NOVEMBER 2023
SEMESTER 3 : COMPUTER APPLICATION
COURSE : **19U3CRCAP6 : OBJECT ORIENTED PROGRAMMING IN C++**

(For Regular - 2022 Admission and Improvement/Supplementary - 2021/2020/2019 Admissions)

Time : Three Hours   Max. Marks: 75

PART A
Answer All (1 mark each)

1. What do you mean by dynamic constructor?
2. What is the significance of scope resolution operator::?
3. Define encapsulation.
4. Define single inheritance.
5. How can we classify data types in C++?
6. What do you mean by pure virtual functions?
7. Differentiate between base class and derived class
8. What do you understand by nested classes?
9. Define dynamic memory allocation.
10. What is the need of escape sequences in C++?

(1 x 10 = 10)

PART B
Answer any 8 (2 marks each)

11. When does ambiguity arise in multiple inheritance? How can we resolve it?
12. What are objects? How are they created?
13. What do you understand about a member function? How does a member function differs from an ordinary function?
14. Write short note on the significance of the destructors.
15. Differentiate between functions read() and write()
16. Compare "struct" and "class" keyword of C++.
17. What is rethrowing an exception in C++?
18. Differentiate call by value and call by reference.
19. Distinguish between function overloading and operator overloading in C++
20. What is meant by type conversion? How is implicit conversion different from explicit conversion?

(2 x 8 = 16)

PART C
Answer any 5 (5 marks each)

21. Write a program to find the result of 50 students using array of objects.
22. Explain the manipulation of string using overloaded operators with an example program
23. Explain briefly the concepts of data abstraction and encapsulation with the help of an example.
24. Write a program to illustrate try - catch mechanism in c++.
25. Explain function definition and function prototyping with an example.
26. What is a virtual base class? What is their significance? Write an example
27. Explain about nesting of member function with example.

(5 x 5 = 25)

Answer any 2 (12 marks each)

28. Explain friend function with its characteristics. Write a program using friend function to find the largest ot two numbers in two different classes.

29. Explain about control structures in C++ with syntax and examples.

30. Explain the concept and use of this pointer. Give an example.

31. Explain inheritance and also explain about different types of inheritance. Write a program to implement multilevel inheritance.

(12 x 2 = 24)