



K24U 3415

Reg. No. : .....

Name : .....

**III Semester B.Sc. Degree (C.B.C.S.S. – O.B.E.-Regular/Supplementary/  
Improvement) Examination, November 2024  
(2019 to 2023 Admissions)  
GENERAL AWARENESS COURSE IN COMPUTER SCIENCE/COMPUTER  
SCIENCE WITH AI AND ML  
3A11CSC : Programming in C++**

Time : 3 Hours

Max. Marks : 40

**PART – A  
(Short Answer)**

Answer **all** questions.

**(6×1=6)**

1. What does OOP stand for ?
2. Name one key benefit of OOP.
3. What is a copy constructor in C++ ?
4. What is operator overloading ?
5. What is a stream in C++ ?
6. What is the purpose of manipulators in formatted I/O ?

**PART – B  
(Short Essay)**

Answer **any 6** questions.

**(6×2=12)**

7. Describe the structure of a C++ program and list its key components.
8. What is the concept of function overloading in C++ ?
9. What is the purpose of static member functions ?
10. What is an inline function ? How can it be used in C++ ?

P.T.O.



11. What are the rules for overloading operators in C++ ?
12. Define single inheritance with an example.
13. What is the purpose of the 'this' pointer ?
14. Name two classes used for file stream operations in C++.

PART – C

**(Essay)**

Answer **any 4** questions.

**(4×3=12)**

15. Discuss the key benefits of Object-Oriented Programming (OOP) and explain how they differ from procedure-oriented programming.
16. Explain how constructors with default arguments work in C++ with an example.
17. Explain the nesting of member functions in C++ and provide an example.
18. How do constructors behave in derived classes ?
19. Explain the concept of virtual functions with an example.
20. Explain how to manage output using manipulators with an example.

PART – D

**(Long Essay)**

Answer **any 2** questions.

**(2×5=10)**

21. Explain the purpose and functionality of the scope resolution operator, memory dereferencing operator and memory management operators in C++. Provide examples to illustrate their use.
  22. What are friend functions in C++ ? Explain their importance and how they differ from regular member functions with an example.
  23. Explain the different types of inheritance in C++ with examples.
  24. Describe error handling mechanisms during file operations in C++.
-