

**3E1204**

Roll No. \_\_\_\_\_

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**3E1204**

**B.Tech. III Sem. (Main) Examination, April/May - 2022**  
**Artificial Intelligence & Data Science**  
**3AID4-06 Object Oriented Programming**  
**AID, CAI, CS, IT**

**Time : 3 Hours****Maximum Marks : 70****Instructions to Candidates:**

*Attempt all ten questions from Part A. All five questions from Part B and three questions out of Five questions from Part C.*

*Schematic diagrams must be shown wherever necessary. Any data missing may suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.*

*Use of following supporting material is permitted during examination (As mentioned in form No.205)*

**PART - A**

(Word limit 25)

**(10×2=20)**

1. What is the difference between struct and class in C++?
2. How do you declare a member function in C++?
3. Define constructor in C++?
4. Why inline function is used?
5. What is an abstract class?
6. Can we create object of virtual class in C++?
7. What are static data member in C++?
8. Define Polymorphism?
9. Define function templates?
10. What are the three file stream classes?

**PART - B**

(Word limit 100)

**(5×4=20)**

1. What do you mean by exception handling? Explain the four steps of exception handling?
2. What do you mean by friend function in C++?
3. Explain function overriding in C++ with example?
4. Explain Dynamic binding with example.
5. What is OOP? Explain its characteristics.

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### **PART - C**

(Any Three)

(3×10=30)

1. Define class? How can we define member function inside and outside the class in C++? Explain with suitable example.
  2. Explain :
    - a) new and delete operators.
    - b) inline function.
  3. What is inheritance? Explain the types of inheritance? Write a program to add two numbers using multiple inheritance in C++?
  4. What is operator overloading? Explain unary and binary operator overloading in C++ with suitable example?
  5. How exception are handled in C++ programming explain with program?
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