

Roll No. _____

Paper Code
3E1204

B.Tech. III-Sem (Main & Back) 2025-26
Artificial Intelligence
3CS4-06 Object Oriented Programming
AID,CAI,CS,IT,CCS, CDS,CIT,CSD,CSR,AI
3E1204

Time:3 Hours

Maximum Marks :70

Attempt all ten questions from Part A, five questions out of seven questions from Part B and three questions out of five questions from Part C.

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

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

1- _____ 2- _____

Part A

(Answer should be given up to 25 words only)

All questions are compulsory.

10 x 2 = 20

- Q.1 Define member function inside and outside class.
- Q.2 What are the characteristics of OOP?
- Q.3 What is inline function?
- Q.4 What is abstract class and pure virtual function explain it with the help of example?
- Q.5 Explain the concept of reference with the help of example
- Q.6 Explain operator overloading used in C++.
- Q.7 Explain the concept of dynamics binding and virtual function.
- Q.8 What is the role of template in C++?
- Q.9 What is the importance of stream class in OOP?
- Q.10 Explain the concept of class, object, data member, member function with the help of example.

Part B

(Analytical/Problem solving questions)

Attempt any Five questions.

5 x 4 = 20

- Q.1 Differentiate between union & structure with the help of example.
- Q.2 Differentiate between ^{T-448} constructor & destructor with the help of example.
- Q.3 What is friend function explain it with the help of example?
- Q.4 What is the significance of function overriding in C++?
- Q.5 Explain operator overloading with example.
- Q.6 Explain the concept of polymorphism in C++ with the help of example.
- Q.7 What are the function with default argument?

Part C

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any Three questions.

3 x 10 = 30

- Q.1 Explain the structure used in C++ and also explain how pointers are used in structure with the help of example.
- Q.2 Explain the concept of ^{T-448} dynamics memory allocation using new and delete operators with the help of an example.
- Q.3 Explain inheritance and types of inheritance in detail with the help of an example.
- Q.4 What do you mean by data binding and encapsulation explain in detail?
- Q.5 Write a short note on :
a) Exceptional handling.
b) File handling.