Arya College of Engineering
Department of Computer Science
3CS4-06: Object Oriented Programming
Model Guess Paper-2025-26, Prepared By Dr. Sanjay Tiwari

Unit 1

Short Answers :(2 to 3 Marks Each)

Q1. What is Object Oriented Programming?

Q2. What is Encapsulation?

Q3. what is access Specifier?

Q4. What is scope resolution operator?

Q5. What is Polymorphism?

Q6. Define the structure in C++?

Q7. What is class and objects? How they are creating?

Q8. What are the Data member and Member function of a class in C++?

Q9. What is 'cout' and 'cin'?

Q10. What do you mean by 'void' return type?

Descriptive Answers: (5 to 20 Marks)

Q1 Explain the basic concepts or characteristics of object oriented programming language?

Q2 What is programming paradigms? Explain the procedure and object oriented programming paradigms?

Q3 Explain the basic structure of C++ program with suitable program code.

Q4 What do you understand by access specifier in C++ language? Explain the various types of access specifiers Supported by C++ language?

Q5 What do you mean by Data member and member function in C++? Explain the member function inside and outside the class with suitable program code.

Q6 What do you mean by array of objects? Explain with suitable program code.

Q7 What do you mean by structure in C++? Explain the structure with the suitable program code.

Q8 What are the advantage or benefits and application of object oriented programming language?

Q9 What is difference between class and Structure?

Q10 What do you mean by Data abstraction in C++? Explain

Unit-2

Short Answers :(2 to 3 Marks Each)

Q1 What are manipulators in C++ language?

Q 2 What is reference Variable?

Q 3 What is function overloading?

Q 4 What is operator overloading?

Q 5 What is 'this' pointer?

Q 6 What is early and late binding?

Q 7 What do you understand by constructor and destructor in C++ language?

Q 8 What is inline function in C++ language?

Q 9 Differentiate between inline function and macros

Q10 What is the use of the keyword 'using' in C++ language?

Q11 How constructors are different from a normal member function?

Q12 When destructor is called? How destructors are different from a normal member function?

Q13What is a virtual destructor? Explain the use of it?

Descriptive Answers: (5 to 20 Marks)

Q1. What do you mean by dynamic memory allocation? Explain the New and Delete operator with help of Suitable program code

Q2 What is friend function in C++? What are the risks associated with the use of friend functions?

Q3 What is constructor? How many types of constructors are in C++ language? Describe with the help of a suitable program code.

Q4 Explain the concept of inline functions in C++. How it is beneficial in programming?

Q5 What is function overloading? Explain with help of suitable example?

Q6 Write a C++ program to compute the area of circle, triangle and rectangle using function Overloading?

Q7 What is the difference between constructor and destructor?

Q8 What do you mean by function with default arguments? Explain.

Q9 What is copy constructor in C++? How it is beneficial?

Q10 Why new operator is better than malloc( ) function for dynamic memory allocation?

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Unit-3

Short Answers :(2 to 3 Marks Each)

Q1 What do you mean by inheritance in C++ language?

Q2 What do you mean by derived class? Describe the super or parent or base class and sub or child or derived Class?

Q3 Describe the syntax of multi level inheritance in C++ language?

Q4 What is an abstract class?

Q5 When do we use the protected visibility specifier to a class member?

Q6 What is pure virtual function?

Q7 What is dynamic binding?

Q8 Differentiate between three visibility labels?

Q9 Explain the Run time polymorphism, its advantage and how it is implemented in C++ language?

Q10 What is the difference between delete and delete [ ]?

Descriptive Answers: (5 to 20 Marks)

Q1 What are the different forms of inheritance? Write a program to implement the single inheritance using public visibility mode?

Q2 What is visibility mode? What are the different inheritance visibility modes supported by C++?

Q3 Define multiple inheritances? Describe the multiple inheritances with suitable program code?

Q 4 Define virtual base classes. Explain why we use of virtual Classes.

Q5 What is a virtual function? Why do we need virtual function?

Q6 Explain the Constructor in derived Class with suitable program code.

Q7 What is the concept of function overriding? Explain with syntax and C++ program code?

Q8 Differentiate between virtual and pure virtual function?

Q9 Define virtual base class? Explain why we use virtual base classes.

Q10 What is abstract class and also Explain the its purpose?

Unit-4

Short Answers :(2 to 3 Marks Each)

Q1 Define the static variable?

Q2 What is a namespace?

Q3 What is Comments line in C++

Q4 What do you mean by Local Class?

Q5 What is constant data member and constant member function?

Q6 What do you understand by dynamic binding?

Q7 What is polymorphism?

Q8 What is an operator overloading?

Q9 List the operators that cannot be overloaded?

Q10 What is mutable keyword?

Descriptive Answers: (5 to 20 Marks)

Q1 What do you mean by static data member? Explain with suitable Program code?

Q2 What do you mean by static member function? Explain with suitable Program code?

Q3 What is polymorphism? How is it achieved at compile time and runtime? Explain both with the help of example?

Q 4 What do you mean by operator overloading? Name the operators that cannot be overloaded.

Q5 What is Unary and binary operator overloading? Explain with suitable program code

Q6 What do you mean by Virtual function? Explain with suitable program code?

Q7 What is pointer to a constant variables and constant pointer? Explain with proper syntax.

Q8 What do you mean by dynamic binding?

Q9 Mention the properties of static data member function?

Q10 Mention the properties of static data member?

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Unit-5
Short Answers :(2 to 3 Marks Each)

Q1 Are the exceptions and error same?

Q2 Define the put() and get() Function?

Q3 What is generic programming? How is it implemented in C++ language?

Q4 What is the role of file () function?

Q5 What is a stream? Name the streams generally used for file I/O?

Q6 How is binary files different from text files in C++?

Q7 What is a class template?

Q8 What happens if an exception is thrown outside a try block?

Q9 What should be placed inside a try block? Give the syntax?

Q10 What should be placed inside a catch block?

Q11 When should a program throw an exception?

Q12 Differentiate between overloaded function and function templates?

Q13 Differentiate between term class template and template class?

Q14 What is difference between template and macro?

Q15 How do the I/O facilities in C++ differ from that in C

Descriptive Answers: (5 to 20 Marks)

Q1 What is exception handling? Describe the exception handling mechanism with help of a suitable program?

Q2 What is Template? Explain the Class Template with suitable program Code?

Q3 What is Function Template? Explain the Function Template with a suitable program code?

Q4 What is File mode? Describe the various file mode options available in C++ language?

Q5 Describe briefly the features of I/O system supported by C++?

Q6 What are advantage of saving data in the binary form in a file?

Q7 What is Exception Handling? Does C++ support Exception Handling?

Q8 What are the advantages of using exception handling mechanism in a program?

Q9 When do we use multiple catch handlers?

Q10 What is an exception specification? And when is it used?

Q11 Write a function template to perform linear search in an array?

Q12 Write a function template to find the minimum and maximum values by passing non-type arguments to the Template?