MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
UG Model question paper

Time: 3 hours **Object Oritented Programme** **Max Marks: 70**

Note: This question paper contains of 5 sections. Answer five questions, choosing one question from each section and each question carries 14 marks

Section-I

1. a)Describe OOP concept in C++ [7M]
   b)List out operators and describe them. [7M]

OR

2. a)Write the structure of C++ program [4M]
   b) Differentiate OOP and POP [7M]
   c)What is the purpose of Namespace [3M]

Section-II

3. a)Describe inline function. [5M]
   b)Write about access control with examplr program each [4M]
   c)Define friend function [5M]

OR

4. a) What are default arguments. [7M]
   b)Write about static class members. [7M]

Section-III

5. a)Describe types of constructors. [7M]
   b) Explain Dynamic constructor with an example [7M]

OR

6. a)List out types of inheritance .Explain [7M]
   b) Define destructor .Explain with an example program [3M]
   c)Clearly explain constructor s in derived class [4M]

Section-IV

7. a)Explain Runtime polymorphism. [7M]
   b) Describe virtual function with an example. [7M]

OR

8. a)Describe about Dynamic memory allocation with its functions [7M]
   b) Explain about pointer and functions [7M]

9. a)Explain types of templates. [7M]
   b) Describe types of Exception. [7M]

OR

10. a)Expalin class templates with multiple parameters. [5M]
    b) Clearly describe Rethrowing an exception [5M]
    c)Write about specification exception. [4M]

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SECTION-I

1. Explain briefly about Object Oriented Programming concepts? [14M]

OR

2. a) Explain briefly about new,delete,setw endl,ScopeResolutionOperators in C++? [7M]
   b) Write a C++ program for sorting of numbers Descending order [7M]

SECTION-II

3. a)Explain static Data Members and static member functions [7M]
   b)Define class? Explain how to declare class with one example program? [7M]

OR

4. a)How to access private members of class using non member functions with one example? [7M]
   b) How many ways to pass object as a function arguments explain with example program? [7M]

SECTION-III

5. a) Define Inheritance? Explain Multiple, Hierarchical Inheritance? [7M]
   b) Explain briefly about Types of Constructors with one example? [7M]

OR

6. a) Explain briefly about Virtual Base Class with one example? [7M]
   b) Explain about constructors in derived class? [7M]

SECTION- IV

7. How to achieve run time polymorphism in C++ explain with one example program [14M]

OR

8. a)Explain briefly about this pointer? [7M]
   b) Explain briefly about pointer to derived classes? [7M]

SECTION- V

9. a) Explain class templates with multiple parameters? [7M]
   b**)** Explain function templates? [7M]

(OR)

10. Explain briefly about exception handling? [14M]

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Section-I

1. a) Differentiate Object oriented programming and procedure oriented programming [7 M]
   b) Write a brief note on the principles of Object Oriented Programming. [7M]

OR

2. a) State the benefits of Object Oriented Programming [4 M]
   b) Differentiate entry-controlled-loop and exit-controlled-loop [4 M]
   c) Write a C program to display prime number between 1 and n [6 M]

Section-II

3. a) Explain Static members and Static Member functions in detail [7 M]
   b) Differentiate an inline function and a friend function [7 M]

OR

4. a) List out the ways of passing objects as arguments to the function and explain. [12M]
   b) State the usage of scope resolution operator. [2 M]

Section-III

5. a) Explain - Hierarchical Inheritance, Multiple Inheritance and Multilevel Inheritance [10 M]
   b) Write a program to illustrate the order of execution of constructors and destructors [4 M]

OR

6. a) Write a short note on constructors and destructors. [6 M]
   b) Explain Operator Overloading. [8 M]

Section-IV

7. a) Write a program to illustrate the usage of memory management operators [6 M]
   b) What is meant by Runtime polymorphism? [8M]

OR

8. a) What is the use of this pointer? [3M]
   b) Write a program to illustrate pure virtual function. [8M]
   c) Do we have virtual destructors? Justify your answer. [3M]

Section-V

9. a) Differentiate class templates and function templates [8M]
   b) State the types of exceptions [4 M]
   c) Write a program to illustrate catching of all exceptions [2M]

OR

10. a) What is meant by generic programming? [2M]
    b) Write a template based program to sort the given list of elements [6M]
    c) Explain the following three keywords – try, catch, throw [6M]

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SECTION-I

1. Write the differences between POP and OOP? [14M]

OR

2. a) Write a C++ Program which demonstrates scope resolution operator and explain? [7M]
   b) Write a C++ program for sorting of numbers Ascending order [7M]

SECTION-II

3. a) Explain static Data Members and static member functions in detail with example Programs? [7M]
   b) Explain about friend function with example program? [7M]

OR

4. a)How to access private members of class using non member functions with one example? [7M]
   b) Explain Inline function with example program? [7M]

SECTION-III

5. a) Define Inheritance? Explain Hybrid, Multi path Inheritance? [7M]
   b) Explain briefly about Types of Constructors with one example? [7M]

OR

6. a) Explain briefly about Virtual Base Class with one example? [7M]
   b) Explain about constructors in derived class? [7M]

SECTION- IV

7. Explain run time polymorphism with example program? [14M]

OR

8. a)Explain briefly about this pointer? [7M]
   b) Explain briefly about pointer to derived classes? [7M]

SECTION- V

9. a) Explain class templates with multiple parameters? [7M]
   b**)** Explain function templates with example programs? [7M]

OR

10. Write about Exception handling in detail? [14M]

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Section-I

1. a)Explain Basic concepts of OOP in C++ [7M]
   b)Explain operators of C++ in detail . [7M]

OR

2. a) Write the structure of C++ program [4M]
   b) Differentiate OOP and POP [7M]
   c) What is the purpose of Namespace [3M]

Section-II

3. a)Explain inline function with an example. [5M]
   b)Write about access control with example program each [4M]
   c) Explain friend function with syntax [5M]

OR

4. a) Explain default arguments with an example. [7M]
   b)Write about static data members. [7M]

Section-III

5. a)Describe types of constructors. [7M]
   b) Explain Dynamic constructor with an example [7M]

OR

6. a)List out types of inheritance .Explain [7M]
   b) Define destructor .Explain with an example program [3M]
   c) Explain constructor s in derived class [4M]

Section-IV

7. a)Explain Runtime polymorphism. [7M]
   b) Describe pure virtual function with an example. [7M]

OR

8. a)Describe about Dynamic memory allocation with its functions [7M]
   b) Explain about pointer and functions [7M]

Section-V

9. a)Explain types of templates. [7M]
   b) Describe types of Exception. [7M]

OR

10. a)Expalin class templates with multiple parameters. [5M]
    b) Clearly describe Rethrowing an exception [5M]
    c)Write about specification exception. [4M]

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Section-I

1. a) Explain features of object oriented programming? [6M]
   b) List the operators added by C++ which aid OOP ? [6M]
   c) Discuss the need of enum ? [2M]

OR

2. a)Write in detail about different types of loop statements with syntax and examples? [10M]
   b) Differentiate between Procedure Oriented and Object Oriented Programming? [4M]

Section-II

3. a)Define a Class and Object? Write a program to create a class STUDENT with the following specifications.
   Data members: Name, Roll No. And Average Marks
   Member functions: Read & Write
   Use the above specification to read and print the information of a student. [6M]
   b) What are friend functions? Write a c++ program to find the sum of two complex numbers using friend functions [8M]

OR

4. a)Write an example to show how objects are passed as arguments to a function [8M]
   b) What are static member functions? Explain with an example [6M]

Section-III

5. a) What are constructors? Explain the different types of constructors with syntax? [6M]
   b) What are the different forms of inheritance? Give an example for each? [8M]

OR

6. a) What is Inheritance? Write a c++ program to illustrate multiple inheritance? [8M]
   b) What is a copy constructor? Write an example showing the use of copy constructor? [6M]

Section-IV

7. a) Differentiate between early binding and late binding, with an example explain how late binding can be achieved in C++. [8M]
   b) What are pure virtual functions? Explain with an example? [6M]

OR

8. a) What is Operator Overloading? Write a program to overload + binary operator for complex numbers? [8M]
   b) What are virtual Destructors? Explain with an example? [[6M]

Section-V

9. a) Define a template? Write a function template to swap two numbers [8M]
   b) Discuss about the importance of try, catch and throw keywords? [4M]
   c) Distinguish between overloaded functions and function templates? [2M]

OR

10. a)Write an example of a class template? [8M]

b) Write a C++ Program to illustrate exception handling? [6M]

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Section-I

1. a) Differentiate object oriented programming & procedure oriented programming. [7M]
   b)Explain the following concepts in C++? [7M]
   i)typecasting ii)reference variables. iii)scope resolution operator

OR

2. a)Write in detail about different types of loop statements with syntax and examples? [7M]
   b))Explain features of OOP in C++. [7M]

Section-II

3. a) Explain inline function with program. [5M]
   b) Explain objects as function arguments with program [4M]
   c) Write a C++ program for friend function. [5M]

OR

4. a) Explain array of objects with program. [7M]
   b) Explain about static member functions with program.[7M]

Section-III

5. Define Constructor.Explain the following Constructors with programs. [14M]
   a)Parameterized constructor b)Copy constructor c)Dynamic constructor.

OR

6. a) Explain different types of inheritance with programs . [14M]

Section-IV

7. a)Explain this pointer with program. [5M]
   b) Explain abstract classes with program. [5M]
   c)Write a C++ program to overload unary operator(++)? [4M]

OR

8. a)Explain about virtual base classes with program. [5M]
   b) Write a C++ program to overload binary operator(+). [4M]
   c)Explain pointers to derived classes with program ? [5M]

Section-V

9. a) Define a template? Write a function template to swap two numbers [8M]
   b) Discuss about the importance of try, catch and throw keywords? [4M]
   c) Distinguish between overloaded functions and function templates? [2M]

OR

10. a)Write an example of a class template? [8M]
    b) Write a C++ Program to illustrate exception handling? [6M]

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Section-I

1. a)Explain the differences between POP and OOP. [7M]
   b)Explain the different types of data types in C++. [7M]

OR

2. a)Explain the different types of operators in C++. [7M]
   b)Write a C++ program to print the Fibonacci sequence of first n terms. [7M]

Section-II

3. a)Explain class and object with an example program. [7M]
   b)Explain inline function with an example program. [7M]

OR

4. a)Explain friend function with an example program. [7M]
   b)Write about static data members and static member functions.[7M]

Section-III

5. a)Describe the different types of constructors in C++. [7M]
   b)Explain multiple inheritance with an example program. [7M]

OR

6. a)Explain the differences between constructors and destructors. [7M]
   b)Explain hierarchical inheritance with an example program [7M]

Section-IV

7. a)Explain the different types of polymorphisms in C++. [7M]
   b)Explain virtual functions with an example program. [7M]

OR

8. a)Describe about dynamic memory allocation with its functions. [7M]
   b)Explain operator overloading with an example program. [7M]

Section-V

9. a)Explain the different types of templates in C++. [7M]
   b)Expalin exception handling mechanism in C++. [7M]

OR

10. a) Expalin class templates with multiple parameters. [7M]
    b) Explain the different types of exceptions with an example program. [7M]

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1. a)Explain Basic Concepts of OOP in C++. [7M]
   b)Explain the following concepts in C++? [7M]
   i)typecasting ii)reference variables.

OR

2. a)Write the structure of C++ program. [4M]
   b) Differentiate OOP and POP. [7M]
   c)What is the purpose of Namespace. [3M]

Section-II

3. a)Explain inline function with program. [5M]
   b)Explain objects as function arguments with program [4M]
   c)Write a C++ program for friend function . [5M]

OR

4. a) Explain array of objects with program. [7M]
   b)Explain about static member functions with program. [7M]

Section-III

5. Define Constructor.Explain the following Constructors with programs. [14M]
   a)Parameterized constructor b)Copy constructor c)Dynamic constructor.

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6. Explain different types of inheritance with programs . [14M]

Section-IV

7. a)Explain this pointer with program. [5M]
   b) Explain abstract classes with program. [5M]
   c)Write a C++ program to overload unary operator(++)? [4M]

OR

8. a)Explain about virtual base classes with program. [5M]
   b) Write a C++ program to overload binary operator(+). [4M]
   c)Explain pointers to derived classes with program ? [5M]

Section-V

9. a) Explain function templates with multiple parameters. [5M]
   b) Explain about specifying exceptions with program. [5M]
   c)Briefly explain exception handling mechanism. [4M]

OR

10. a)Explain class templates with multiple parameters. [5M]
    b) Clearly describe Rethrowing an exception. [5M]
    c)Explain member function templates . [4M]

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1. a)Explain the differences between POP and OOP. [7M]
   b)Explain operators of C++ in detail . [7M]

OR

2. a) Write the structure of C++ program [4M]
   b) Explain basic concepts of OOP [7M]
   c) What is the purpose of namespace [3M]

Section-II

3. a)Explain inline function with an example. [5M]
   b)Write about access control in C++ [4M]
   c) Explain friend function with example program [5M]

OR

4. a) Explain default arguments with an example. [4M]
   b)Write about static data members and static member functions with an example program.[10M]

Section-III

5. a)Describe types of constructors. [7M]
   b) Explain Dynamic constructor with an example [7M]

OR

6. a)List out types of inheritance .Explain [7M]
   b) Define destructor.Explain with an example program [3M]
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