**CAOP0005 - Object Oriented Programming and Design**

**Total Marks: 100 Duration: 3hrs**

**1. Choose the most appropriate options: [1X10=10]**

**a.** We can prevent a function from throwing any exceptions.  
i.) True  
ii.) False

**b.** Functions called from within a try block may also throw exception.  
i.) True  
ii.) False

c. The explicit keyword is an optional decoration for the constructors that takes exactly\_\_\_\_\_argument.  
i.) No argument

ii.) Two

iii.) Three  
iv.) One

d. Which is the correct statement about operator overloading?  
i.) Only arithmetic operators can be overloaded  
ii.) Only non-arithmetic operators can be overloaded  
iii.) Precedence of operators are changed after overloading  
iv.) Associativity and precedence of operators does not change

e. Which is not the correct exception handling technique in C++?

i.) try

ii.) catch

iii.) throws

iv.) throw

f. Which is used to define the member of a class externally?  
i.) :  
ii.) ::  
iii.) #  
iv.) !!$

g. If inner catch handler is not able to handle the exception then\_\_\_\_\_\_\_\_\_\_ .  
i.) Compiler will look for outer try handler  
ii.) Program terminates abnormally

iii.) Compiler will check for appropriate catch handler of outer try block  
iv) None of these

h. Several functions of the same name can be defined, as long as they have different parameters, this is called

i.) Function overloading

ii.) Functions reusing

iii.) Operators overloading

iv.) None of them

i. When a destructor is called?  
i.) After the end of object life  
ii.) Anytime in between object’s lifespan  
iii.) At end of whole program  
iv.) Just before the end of object life

j. Which keyword is used to declare the friend function?  
i.) firend  
ii.) friend  
iii.) classfriend  
iv.) myfriend

2. Answer the following questions in brief (any 5 out of 6): [3X5=15]

a. Define the different types of Constructors used in C++

b. What is Exception Handling?

c. Differentiate between friend function and class function.

d. State the different modes of inheritance in C++

e. What are the advanatges of OOD?

f. Deefine the different types of exception handling techniques in C++

3. Answer the following questions (any 5 out of 6): [7X5=35]

a. What is Copy constructor? Write a program showing the use of copy constructor.

[3+4=7]

b. What is Operator Overloading? Write a program to conversion from basic to class

type. [3+4=7]

c. What is virtual base class? Why it is needed? Write a program supporting your answer

[2+2+3]

d. Differentiate between class template and function template [7]

e. Discuss about the Booch’s object identification method. [7]

f. Differentiate between static and dynamic binding. [7]

4. Answer the following questions (any 4 out of 5): [10X4=40]

a. What is modelling in Object Oriented Programming? Why it is required? Explain the different types of models. [2+3+5]

b. Give syntax and program for default, parameterized and copy constructor. [10]

c. Write a program in C++ showing try, catch and throw exception handling.[10]

d. Explain about the different views captured by the UML diagram. [10]

Summary

Module Maximum Marks which can be given Marks Allotted

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Module 1 (16) 33 29

Module 2 (12) 25 25

Module 3 (16) 33 26

Module 4 (16) 33 30

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Total 124 110