Enrollment No: _____ Exam Seat No:_____

C. U. SHAH UNIVERSITY
Winter Examination-2022

Subject Name: Object Oriented Programming with C++

Subject Code: 4CS03IPC1   **Branch: B.Sc.I.T.**

Semester: 3   **Date: 21/11/2022**   **Time: 11:00 To 02:00**   **Marks: 70**

Instructions:
(1) Use of Programmable calculator & any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

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Q-1 Attempt the following questions: **(14)**

a) Which of the following is used for comments in C++?
  A) /* comment */   B) // comment */   C) // comment   D) Both A and D

b) What is the full form of OOP?
  A) Object Oriented Programming   B) Own Object Programming
  C) Object Overall Program   D) Our Objective Programming

c) Who Invented C++?
  A) Dennis Ritchie   B) Ken Thompson   C) Brian Kernighan   D) Bjarne Stroustrup

d) How many types of Constructor are possible in C++?
  A) 3   B) 2   C) 1   D) 0

e) In C++, the members of a class are _____ by default
  A) Public   B) Protected   C) Static   D) Private

f) Which of the following operator cannot be overloaded in C++?
  A) ?:   B) +   C) -   D) %

g) Which is the correct example of a binary operator?
  A) -   B) +   C) ++   D) Dereferencing Operator (*)

h) Which of the following is called address operator?
  A) *   B) %   C) &   D) _

i) Wrapping data and its related functionality into a single entity is known as _____
  A) Abstraction   B) Encapsulation   C) Polymorphism   D) Modularity

j) Which is used for memory deallocation in C++?
  A) dynamic   B) new   C) delete   D) realloc

k) Where is the derived class is derived from?
  A) Derived   B) Base   C) Class   D) Both A & B

l) >> Operator is known as _____ Operator

    A) Insertion   B) Extraction   C) Final   D) None

m) What is the full form of STL?

    A) Simple Template Library   B) Standard Template Library

    C) Static Type Library   D) Single Type based Library

n) Which of the following is not a kind of Inheritance?

    A) Multiple   B) Distributed   C) Multi level   D) Hierarchical

Attempt any four questions from Q-2 to Q-8

Q-2 Attempt all questions   **(14)**
  a) Explain the concept of Object Oriented Paradigms (OOPs).   (07)
  b) Explain the use of Constructor and Destructor with the help of example.   (07)

Q-3 Attempt all questions   **(14)**
  a) Explain Friend Function with suitable example   (05)
  b) What is Object? Explain how to create Array of Object for class.   (05)
  c) Write a note on: Dynamic Memory Allocation (DMA)   (04)

Q-4 Attempt all questions   **(14)**
  a) Write a program to overload unary + operator   (07)
  b) Differentiate between Operator Overloading and Operator Overriding   (07)

Q-5 Attempt all questions   **(14)**
  a) Explain Inline Function with appropriate example   (05)
  b) Explain Private, Public, Protected access specifier in details   (05)
  c) Differentiate between C and C++   (04)

Q-6 Attempt all questions   **(14)**
  a) Explain how to define member function outside of a class with the help of example   (05)
  b) What is Virtual Function? Explain with appropriate example   (05)
  c) Explain Scope Resolution Operator with example   (04)

Q-7 Attempt all questions   **(14)**
  a) Explain different types of Inheritance with the help of a sample program   (07)
  b) Write a program to create class (SeatNo, Name) and input data using parameterized constructor and also print the data   (07)

Q-8 Attempt all questions   **(14)**
  a) Differentiate: Early binding V/s Late binding   (07)
  b) Write a program to create super class Employee (EID, Name, Basic_Salary) and Sub class Gross_Salary (DA, HRA, PF, Net_Salary) using single inheritance. Input data and display it. (DA = 50% of Basic_Salary, HRA = 5% of Basic_Salary, PF = 10% of Basic_Salary, Net_Salary = Basic_Salary + DA + HRA + PF).   (07)