

# C. U. SHAH UNIVERSITY

## Winter Examination-2022

Subject Name : Object Oriented Programming

Subject Code : 4TE02OOP1

Branch: B.Tech (All)

Semester: 2

Date: 20/09/2022

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.

- Q-1 Attempt the following questions: (14)**
- a) Which feature of OOP indicates code reusability? 1  
[A] Abstraction [B] Polymorphism [C] Encapsulation [D] Inheritance
  - b) The feature by which one object can interact with another object is \_\_\_\_\_ 1  
[A] Message reading [B] Data Binding  
[C] Message Passing [D] Data transfer
  - c) Which keyword is used to declare virtual functions? 1  
[A] virtually [B] virtual [C] virt [D] anonymous
  - d) Encapsulation and abstraction differ as \_\_\_\_\_ 1  
[A] Binding and Hiding respectively [B] Hiding and hiding respectively  
[C] Hiding and Binding respectively [D] Can be used any way
  - e) Which of the following does not have body? 1  
[A] An Abstract Method [B] A Class  
[C] An Interface [D] None of the above
  - f) How many types of polymorphism in the C++ programming language? 1  
[A] 3 [B] 2 [C] 5 [D] 4
  - g) Which of the following feature is also known as run-time binding or late binding? 1  
[A] Dynamic Typing [B] Dynamic Loading  
[C] Dynamic Binding [D] Data Hiding
  - h) Which operator overloads using the friend function? 1  
[A] -> [B] () [C] = [D] \*
  - i) Which member of the superclass is never accessible to the subclass? 1  
[A] Private Members [B] Protected Members  
[C] Public Members [D] All of the above
  - j) Which class cannot create its instance? 1  
[A] Parent Class [B] Abstract Class  
[C] Nested Class [D] Anonymous Class
  - k) A single program of OOPS contains \_\_\_\_\_ classes? 1  
[A] Only 1 [B] Only 999 [C] Any Number [D] Only 100
  - l) Which of the following class is known as the generic class? 1



- [A] Abstract Class                  [B] Efficient Code  
[C] Final Class                        [D] Template Class
- m) What is the output of following c++ code? 1
- ```
#include <iostream>
using namespace std;
int main()
{
    int a = 5;
    float b;
    cout << sizeof(++a + b);
    cout << a;
    return 0;
}
```
- [A] 2 5                                  [B] 4 5                                  [C] 4 6                                  [D] 2 6
- n) What is the output of following c++ code? 1
- ```
#include <iostream>
using namespace std;
void square (int *x, int *y)
{
    *x = (*x) * --(*y);
}
int main ( )
{
    int number = 30;
    square(&number, &number);
    cout << number;
    return 0;
}
```
- [A] 30                                  [B] Error                                  [C] 870                                  [D] Segmentation fault

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

- Q-2          Attempt all questions    (14)**
- A    Difference between OOP and POP (Write any 7).    7
- B    What is reference variable? Explain with example.    7
- Q-3          Attempt all questions    (14)**
- A    Write a C++ program which finds area of circle using inline function.    7
- B    Write a C++ program to find bigger number among two numbers using friend function.    7
- Q-4          Attempt all questions    (14)**
- A    What is constructor? Explain different types of constructor with examples.    7
- B    Write a C++ program to find sum of 1 to 100 using operator overloading.    7
- Q-5          Attempt all questions    (14)**
- A    Write a C++ program which count number of objects created for class.    7
- B    What is operator overloading? Write rules for operator overloading.    7
- Q-6          Attempt all questions    (14)**
- A    What is inheritance? List out various types of inheritance and explain any one with example.    7
- B    Write a C++ program using pointer and virtual function to find area of    7



- rectangle and triangle.
- Q-7 Attempt all questions (14)**
- A Write a C++ program to copy the source file into the destination file character by character using command line arguments. 7
- B Explain function template with suitable example. 7
- Q-8 Attempt all questions (14)**
- A List out operators in C++ explain any two in detail. 7
- B List out types of loops available in C++ explain any one in detail. 7

