Enrollment No: _____   Exam Seat No:_____

C.U.SHAH UNIVERSITY
Summer Examination-2019

Subject Name : Object Oriented Programming
Subject Code : 4TE02OOP1   **Branch: B.Tech (All)**
Semester : 2   Date : 29/04/2019   Time : 02:30 To 05:30   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) Give definition of Encapsulation.
   b) Which operators cannot be overloaded?
   c) Write advantages of using Functions in your Program.
   d) …………………tells the compiler that how many arguments are there in function and what is type of each argument.
   e) State whether true or false.
      1) We can use object as a function argument.
      2) By default member variables of class are public.
   f) Write output of following program.
```
int m=5;
void main( )
{
    int m=10;
    cout<<"\n Value of m = "<< ::m;
    cout<<"\n Value of m = "<< m;
     getch( );
}
```
   g) Write down syntax for binary operator overloading.
   h) What is abstract class?
   i) List unformatted I/O operations.
   j) Write a syntax to create a template for function.
   k) What is the use of destructor?
   l) What is containership?
   m) Give definition of polymorphism.
   n) Define Keyword.

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

Q-2   Attempt all questions   (14)
   (a) List basic concepts of OOP. Explain any 4 in detail.   **(07)**
   (b) Explain call by reference with example.   **(04)**
   (c) What is the use of inline Function? Write a program to find area of circle   **(03)**
           using inline function.

Q-3		**Attempt all questions**	**(14)**
	(a)	Can we use array with object? If yes then write a C++ program that show array with object. If no then write reason for that.	**(07)**
	(b)	Define Identifier. Write down rules to define identifier.	**(04)**
	(c)	Write a note on this Pointer.	**(03)**
Q-4		**Attempt all questions**	**(14)**
	(a)	What is Constructor? List types of constructor and explain any 2 with example.	**(07)**
	(b)	Write down rules for defining operator overloading. Write a C++ Program for multiplication of two numbers using binary operator overloading with friend function.	**(07)**
Q-5		**Attempt all questions**	**(14)**
	(a)	Explain basic to class and class to basic type conversion with Example.	**(07)**
	(b)	Write a C++ Program that will determine the use of virtual function.	**(04)**
	(c)	Explain following I/O operations.	**(03)**

    1) getline( )
    2) setw( )
    3) precision( )

Q-6		**Attempt all questions**	**(14)**
	(a)	What is Inheritance? List types of inheritance. Explain any 2 with example.	**(07)**
	(b)	Give difference between OOP and POP.	**(04)**
	(c)	Give brief description about Template.	**(03)**
Q-7		**Attempt all questions**	**(14)**
	(a)	Write a note on C++ stream class.	**(04)**
	(b)	What is pure virtual function?	**(03)**
	(c)	Define a structure "book" having data members as book_name, book_id and book_price. Write a C++ program to get information of above book details and display the details.	**(07)**
Q-8		**Attempt all questions**	**(14)**
	(a)	Explain Friend Function with example.	**(07)**

(b) Write a C++ program to implement following Class hierarchy to get and display information using Inheritance concept: **(07)**

```
                    ┌─────────────────┐
                    │     Student     │
                    │                 │
                    └─────────────────┘
                            ▲
                           /
┌──────────────────┐              ┌──────────────────┐
│      Test        │              │  Sports (Score)  │
│ (Sub1,Sub2,Sub3) │              │                  │
└──────────────────┘              └──────────────────┘
            ▲                          ▲
             \                        /
              ┌─────────────────────┐
              │    Result (Total)   │
              └─────────────────────┘
```