Enrollment No: _____   Exam Seat No:_____

C.U.SHAH UNIVERSITY
Summer Examination-2018

Subject Name: Object Oriented Programming
Subject Code: 4TE02OOP1   **Branch: B.Tech (All)**
Semester: 2   Date : 04/05/2018   Time : 10:30 To 01:30   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.
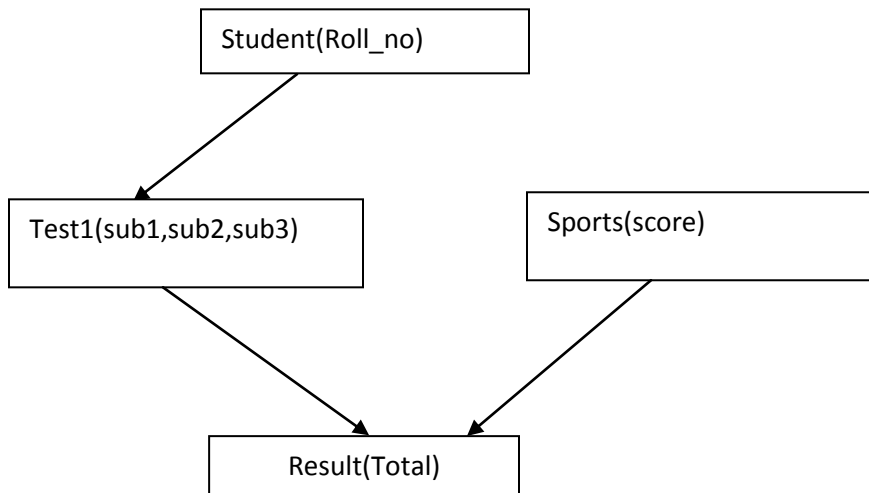 (4) Assume suitable data if needed.

Q-1   **Attempt the following questions:**   **(14)**
  a)   Define dynamic binding.   1
  b)   Which header library must be included for manipulators?   1
  c)   What is cascading insertion operator?   1
  d)   Define hybrid inheritance.   1
  e)   Define encapsulation.   1
  f)   Define this pointer.   1
  g)   Define Abstract class.   1
  h)   What is the output of this program?   1
         #include<iostream.h>
         #include<math.h>
         int main()
         {
         Cout<<"the value of -3.1416 is %lf \n"<<fabs(-3.1416);
         Return 0;
         }

  i)   Regarding the use of new line character (/n) and endl manipulator with cout statement   1
           (a) Both ways are   (b) both are same but endl   (c)endl can't be   (d)\n can't be
               exactly same   additionally performs   written with   written with
                                   flushing of bufer   cout   cout
  j)   Which of the following declarations are illegal?   1
           (a) Void *ptr; (b) char *str="hello"; (c) char str="hello"; (d) const*int p1;
  k)   A function call mechanism that passes arguments to a function by passing a copy of the   1
         values of the arguments is
           (a) call by value (b) call by reference (c) call by name (d) call by value result
  l)   The continue statement   1
           (a) resumes the program (b) resumes the program (c) skips the rest of   (d) all of
               if it is hanged   if it was break was   the loop in current   above
                                        applied   iteration
  m)   Which is used to handle the exceptions in c++?   1
           (a) Catch handler (b) handler (c) exception handler (d) none of above
  n)   The members of a class, by default, are?   1
           (a) public   (b) private   (c) protected   (d) either a or b

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

Q-2	**Attempt all questions**	**(14)**
a)	What is inline function? Write a program to add, subtract, multiply and divide two given numbers using inline function.	**7**
b)	Explain basic structure of C++ with suitable example.	**7**

Q-3	**Attempt all questions**	**(14)**
a)	What is function overloading? Explain with suitable example.	**7**
b)	Write a c++ program that checks whether given number is Armstrong number or not.	**7**

Q-4	**Attempt all questions**	**(14)**
a)	What is destructor? Write a program that explain copy constructor.	**7**
b)	List types of inheritance. Explain multilevel inheritance with suitable example.	**7**

Q-5	**Attempt all questions**	**(14)**
a)	Define unary operator overloading. Write a c++ program that explain unary operator overloading.	**7**
b)	What is virtual base class? Write a program that illustrate virtual base class concept.	**7**

Q-6	**Attempt all questions**	**(14)**
a)	Explain file stream classes in c++.	**7**
b)	Compare virtual function and pure virtual function. Write a c++ program that explain virtual function.	**7**
Q-7	**Attempt all questions**	**(14)**
a)	What is friend function? Explain with suitable example.	**6**
b)	Write a C++ program to implement following Class hierarchy to create, modify and display information using Inheritance concept:	**8**

```
            ┌──────────────────┐
            │ Student(Roll_no) │
            └──────────────────┘
                   │
                   ▼
┌──────────────────────┐        ┌──────────────┐
│ Test1(sub1,sub2,sub3)│        │ Sports(score)│
└──────────────────────┘        └──────────────┘
                   │                    │
                   ▼                    ▼
              ┌──────────────┐
              │ Result(Total)│
              └──────────────┘
```

Q-8	**Attempt all questions**	**(14)**
a)	Explain exception handling that illustrate uses of try .. catch .. blocks.	**7**
b)	What is class Template? Explain with suitable example.	**7**