Tutorial 13 (CO6)

1. Which access specifiers can restrict class members to get inherited?
2. Which among the following can be used together in a single class?
   a) Only private
   b) Private and Protected together
   c) Private and Public together
   d) All three together
3. If class A has add() function with protected access, and few other members in public. Then class B inherits class A privately. Will the user will not be able to call _____ from the object of class B.
   a) Any function of class A
   b) The add() function of class A
   c) Any member of class A
   d) Private, protected and public members of class A
4. What is the output of the following code.

```
#include <iostream>
using namespace std;

class access
{
private:
        int a_pri = 10;
protected:
        int b_pro = 20;
public:
        int c_public = 30;
};

int main()
{
        access a;
        cout<< "private: " << a.a_pri;
        cout<< "protected: "<< a.b_pro;
        cout<< "public: " << a.c_public;

        return 0;
}
```

5. What is the output of the following code?

```
#include <iostream>
using namespace std;

class access
{
protected:
```

```
        int b_pro = 20;
public:
                int c_public = 30;
};

class access_modifier: public access
{
public:
        void disp()
        {
                cout<< "protected: "<< b_pro << endl;
                cout<< "public: " << c_public << endl;
        }

};

int main()
{
        access_modifier a;
        a.disp();

        return 0;
}
```

6. What is the output of the code.

```
#include <iostream>
#include<string>
using namespace std;

class Base
{
public:
        virtual string print() const
        {
                return "This is Base class";
        }
};

class Derived : public Base
{
public:
        virtual string print() const
        {
                return "This is Derived class";
        }
};
```

```
void describe(Base p)
{
        cout << p.print() << endl;
}

int main()
{
        Base b;
        Derived d;
        describe(b);
        describe(d);
        return 0;
}
```

7.
```
#include <iostream>
using namespace std;

int fun(int=0, int = 0);

int main()
{
cout << fun(5);
return 0;
}
int fun(int x, int y) { return (x+y); }
```

8. What are the different forms of inheritance? Give an example for each.
9. We know that a private member of a base class is not inheritable. Is it anyway possible for the objects of a derived class to access the private members of the base class? If yes, how?
   Remember, the base class cannot be modified.
10. Assume that a bank maintains two kinds of accounts for customers, one called as savings and the other as current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level a service charge is imposed. Create a class account that stores customer name, account number and type of account. From this derive the classes cur_acct and sav_acct to make them more specific to their requirements. Include necessary member functions in order to achieve the following tasks: (a) Accept the deposit from a customer and update the balance. (b) Display the balance. (c) Compute and deposit interest. (d) Permit withdrawal and update the balance. (e) Check for the minimum balance, impose penalty, necessary and update the balance.
    Do not use any constructors. Use member functions to initialize class members.
11. Modify the above program to include constructors for all three classes.
12. WAP to illustrate function overloading.