Institute of Computer Technology

B. Tech. Computer Science and Engineering

Sub: ESFP – II

Practical - 08

AIM: To learn about virtual function & Friend Function in C++.

1. Crate an animal class and also create another 2 child classes of animal class called cat & dog. All the defined classes has one common method named gettype(). Print the animal type as per class name using virtual functions.

2. Create a program to calculate the area of a square and a circle using Abstract class & Pure virtual Function.

3. Create 2 classes A and B with common private data member function. How can we call that Private data member function of both classes from outside the class?

Post Practical Work

1. Demonstrate the use of virtual destructor using appropriate C++ code.

2. **What is the output of following C++ program?**

```
class Base{

public:

        void f(){

                        cout<<"Base::f()"<<endl;

        }

};

class Derived:public Base{

public:

        void f(){
```

cout<<"Derived::f()"<<endl; } }; int main(){ Base *d = new Derived(); d->f();

return 0;

}

A. Base::f()
B. Derived::f()
C. Base::f() Derived::f()
D. Compiler error

3. **What is output of the following C++ program?**

```
class A{
public:
    void f(){
        cout<<"A::f()"<<endl;
    }
};
class B:public A{
public:
    void fb(){
        cout<<"A::fb()"<<endl;
    }
};
class C:public A{
public:
    void fc(){
```

```
        cout<<"A::fc()"<<endl;
    }


};
class D: public B,public C{
public:
    void fd(){
        cout<<"A::fd()"<<endl;
    }
};
int main(){
    D obj;
    obj.f();
    return 0;
}
```

A. A::f()
B. A::f() A::f()
C. A::f() A::f()
D. Compiler error