**Assignment – 10(inheritance)**

Q1

Ans:

Inheritance in java is a mechanism to acquire the methods and instance variables of parent class to a child class.

Q2

Ans

SUBCLASS: The class which inherited the data from another class by using “extend” keyword is called subclass.

SUPERCLASS: The class from which the data is extracted is called parent class.

Q3

Ans:

Inheritance is achieved by using “extends” keyword.

Q4

Ans: Actually polymorphism is a Greek word made up of poly means many and morphism means forms. so, if one thing is exist in many forms then it is called polymorphism.

Q5

Ans: method overloading is happen within a class whereas method overriding is happen when there is more than one class and they are under inheritance.

Q6

Ans: Abstraction is a process of hiding data from user.er inheritance

abstract class father{

    abstract void play();//hiding body or implemantation

}

class son1 extends father{

   void play(){

    System.out.println("1st son is a good batsman");

   }

}

class son2 extends father{

     void play(){

        System.out.println("2nd son is very good bowler");

     }

}

class show{

    void take(father ref){

        ref.play();

    }

}

class Abstraction{

    public static void main(String[] args) {

        son1 s1= new son1();

        son2 s2=new son2();

        show s=new show();

        s.take(s2);

    }

}

Q7

Ans: Abstract method hide the implementation from user whereas final make a method constant means we cannot override.

abstract class father{

    abstract void play();//hiding body or implemantation

    final void work(){

        System.out.println("he is a farmer");

    }

}

class son1 extends father{

   void play(){

    System.out.println("1st son is a good batsman");

   }

   void work(){                   //here it gives error due to final keyword

    System.out.println("1st son is a doctor");

   }

}

class son2 extends father{

     void play(){

        System.out.println("2nd son is very good bowler");

     }

     void work(){

        System.out.println("2nd son is engineer");

     }

}

class show{

    void take(father ref){

        ref.play();

        ref.work();

    }

}

class Abstraction{

    public static void main(String[] args) {

        son1 s1= new son1();

        son2 s2=new son2();

        show s=new show();

        s.take(s2);

    }

}

Q8

Ans: final class cannot be a parent class.

Q9

Ans:

Abstraction is a process in which we hide the data by writing incomplete methods and we write only signature of method while in encapsulation we hide the data by using private keyword and follow the whole syntax of method.

Q10

Ans: Compile time polymorphism: If polymorphism exist at a time of compilation. eg: method overloading.

runtime polymorphism: if polymorphism is exist at a time of runtime .

eg: method overriding.