Sylhet Engineering College, Sylhet

(Shahjalal University of Science & Technology)

Department of Computer Science & Engineering

Final Examination, 2020 — **2nd year1st Semester**

Course No: CSE 301 — **Course Title: Object Oriented Programming Language**

Time: 03 (Three) hours — **SET -1** — **Full Marks: 30**

N.B. : (i) Answer all questions from each PART (ii) Use separate answer scripts for each PART

(iii) Marks allotted are indicated in the margin (iv) Special Instruction (if any)----------N/A----------

PART-A

(Answer all questions)

1. (a) What are Wrapper Classes? Explain with example. 02

(b) Consider the following Java program segment. 05

```
X=5;
try{
p=X/Y;
System.out.println("Inside try");}
catch(NumberFormatException e){
System.out.println("Inside catch");}
catch(Exception e){
System.out.println("Inside exception");}
finally{
System.out.println("Inside finally");}

System.out.println("Inside main");
```

Consider both X and Y as int variables. What will be the output if Y initialized to 5? What will be the output if Y initialized to 0?

(c) Write down the output of the following java program segment. 03

```
int x;
String s="SEC";
s+="SEC";
x=45;
s+=x;
System.out.print ("First Java Examination.");
System.out.println ("Value of X is "+x);
System.out.print ("Value of X is + x");
System.out.print ("Value of s is "+s);
x--;
++x;
System.out.println(x);
x%=6;
System.out.println(x);
System.out.println(!(x>50));
```

(d) State whether any error exists in the following code. If so, correct the error and give output. 05

```
class Test {
public static void main(String args[]) {
A a = new A();
a.print();
}
}
class A {
String s;
A(String s) {
this.s=s;
}
public void print() {
System.out.println(s);
}
}
```

PART-B

(Answer all questions)

2. (a) Explain single level and multiple inheritances in java. 03

(b) Check the following java program carefully. If there is any compilation error, fix the error and rewrite the code and then write the output. If there is no error, then write only output. 05

```
abstract class A {
        abstract void show();
        void show1(){ System.out.println("222"); };
}
class B extends A {
        void show(){ System.out.println("000"); };
        void show1(){ System.out.println("333"); };
        void show2(){ System.out.println("555"); };
}
class C extends B {
        void show(){ System.out.println("111"); };
        void show1(){ System.out.println("444"); };
        void show2(){ System.out.println("666"); };
}
public class Cse302Term {
        public static void main(String args[]) {
          C c = new C(); A a = c;
        c.show(); a.show(); a.show1(); c.show2();
          B b = new B(); b.show(); b.show1(); b.show2();
    }
}
```

(c) Check the following java code carefully and determine whether correct or incorrect? Justify your answer. If incorrect, rewrite the correct code. 03

```
public abstract class A {
final abstract void show();
  }
public class B extends A{
void show(int a){}
    }
```

(d) Will the following program work properly? Does the program represent polymorphism property of java and how? 04

```
public class Main {
   public static void main(String[] args) {
      main();
   }
   static void main(){
System.out.println("Its main method");
   } }
```