



NORTHERN UNIVERSITY

B A N G L A D E S H

Department of CSE

Final Examination, Fall-2021

Course Title: Object-Oriented Programming - || Java Lab

Course Code: ECSE 3374

Time: 1 hour

Total Marks: 40

Answer all the following questions.

Note: Save your code in a **single text file** and submit the text file after renaming it as **Full id_your name**. Write your id and full name in the first line of your text file. **Submit only one txt file.**

1. Create an interface named Ant which has one method, *void b1()*.
Create an abstract class named Elephant which has one default method, *void a1()*, and one abstract method, *void a2(int n)*

Create another class named Animal which implements the interface and extends the abstract class. The method, *void a2(int n)* will throw *ArithmeticException* if $n\%2$ is equal to zero. This *ArithmeticException* will also throw a message "This is even number". The method, *void b1()* will print "Look an interface"

You need to handle the exceptions and run the code for an object. Then, save your code in a text file. **[20]**

2. Create a class named CyberStore which extends Thread class. It has three variables: String packageList, String packagePrice, String packageLocation, and a user-defined constructor. CyberStore class has a method *void display()* that prints the packageList, packagePrice, packageLocation. The constructor looks like:

```
CyberStore(String packageList, String packagePrice, String packageLocation){  
    this.packageList=packagePrice;  
    this.packagePrice=packagePrice;  
    this.packageLocation= .packageLocation;  
}
```

CyberStore class has a run method that calls display method.

Create three thread objects of CyberStore class and start the run method for three objects. The first thread object will join() and the second, third thread object will run parallelly.

CyberStore's objects creation:

```
CyberStore t1 = new CyberStore("L1", "six thousands", "Dhanmondi");  
CyberStore t2 = new CyberStore("L2", "eight thousands", "Gulshan");  
CyberStore t3 = new CyberStore("L3", "ten thousands", "Mohakhali");
```

Now run the code and save your code in a text file.

[20]