## EASTERN UNIVERSITY , SRILANKA
## SECOND EXAMINATION IN SCIENCE-(2007/2008)
## FIRST SEMESTER (DEC/JAN 2008)
## OC 206- FUNDERMENTAL OF PROGRAMMING( JAVA)
### (Proper & Repeat)

Answer all questions.                                            Time: Two hours

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Question 01

i) Write a program that will read a float type value from the keyboard and
print the following output.
Small Integer not less than the number.
Given Number.
Largest Integer not greater than the number.                    -------(25marks)

ii) Write a program to generate a Triangle.
For example,
1
2 2
3 3 3
4 4 4 4 and so on as per user given number.                     -------(25marks)

iii) What is the output of the following program(Assuming written inside main)?

```
String s1 = new String("amit");
String s2 = s1.replace('m','i');
s1.concat("Poddar");
System.out.println(s1);
System.out.println((s1+s2).charAt(5));
```
-------(25marks)

iv)  Write a program in Java to find the sum of the numbers 2.5, 4.5, 8.9, 5.0 and 8.9 . -----(25marks)

Question 02

i) Write java codes to  make  connection to a database 'java' in MS-Access through ODBC.
Also write the necessary java codes  to access the data in a table 'student' in the
above database 'java'.                                          -------(50marks)

ii) Write an applet program in Java to explain the methods init(), destroy(), start(),
stop(), paint(), getImage(), getAudioClip() of the applet class.        -------(50marks)

Question 03
a)Explain the following:
I)  the need for exception-Handling,Exception classes.
ii)  exception-handling techniques, the try block, the catch block, the finally block.
iii) the throw statement.
iv) the throws statement.
v) user- defined exceptions,common exceptions.                   -------(50marks)
b) i)How do you create a java thread?
ii) What are the different states of the java thread?
iii) Write a java program to explain the above features in java thread.    -------(50marks)

## Question 04

```
**Look carefully at code and answer the questions below:
1      import java.applet.Applet;
2     import java.awt.*;
3     import java.awt.event.*;
4     public class hello4 extends Applet {
5        public void init(){
6            add(new myButton("BBB"));
7        }
8        public void paint(Graphics screen) {
9     }
10       class myButton extends Button{
11            myButton(String label){
12                super(label);
13             }
14           public String paramString(){
15                return super.paramString();
16             }
17     }
18    public static void main(String[] args){
19        Frame myFrame = new Frame(
20                         "Copyright Amit");
21     myFrame.setSize(300,100);
22     Applet myApplet = new hello4();
23     Button b = new Button("My Button");
24     myApplet.add(b);
25     b.setLabel(b.getLabel()+"New");
26     // myButton b1 =(new hello4()).new myButton("PARAMBUTTON");
27     System.out.println(b1.paramString());
28     myFrame.add(myApplet);
29     myFrame.setVisible(true);
30     myFrame.addWindowListener(new WindowAdapter(){
31             public void windowClosing(WindowEvent e){
32                             System.exit(0);}});
33    }
34 } //End hello4 class.
```

i) If you run the above program via appletviewer(defining a HTML file),what do you see on screen?
------(25marks)

ii) In the above code if line 26 is uncommented and program runs as standalon application,what will happen?
------(25marks)

iii) In the code if you compile as "javac hello4.java",give the names of the files that are generated.
------(25marks)

iv) If from line no 14 keyword "public" is replaced with "protected", what will happen?
------(25marks)