



RAJARATA UNIVERSITY OF SRI LANKA

FACULTY OF APPLIED SCIENCES

BSc (General) Degree in Applied Science

First Year Semester II Examination, October/November 2015

COM 2305 – JAVA PROGRAMMING LANGUAGE

(Theory Paper)

Time allowed: 2 hours

Instructions for candidate

- This is a closed book examination.
- Time allowed will be 2 hours.
- This question paper consists of FOUR (4) questions.
- **ANSWER ALL QUESTIONS.**
- All questions carry equal marks.
- This exam accounts for 60% of the subject assessment.

Q1.

1. Can you run a java program without main method? Explain your answer.(6 marks)
2. Explain the difference between string Buffer object and string object.(8 marks)
3. Distinguish between do while and while loop.(6 marks)
4. Identifying the errors of the following program code and, rewrite the program. (5 marks)

```
import java.io.*;

public class Month{

    public static void Main(String[] args){

        System.out.println("Enter the month number (from 1-3):")
        BufferedReader in = new BufferedReader(System.in);
        int monthNum = in.readLine();

        switch(monthNum)
        {
            case 1:
                System.out.println("It's January");
                break;

            case 2:
                System.out.println("It's February");
                break;

            case 3;
                System.out.println("It's March");
                break;

            default;
                System.out.println("out of range");
        }
    }
}
```

Total: 25 marks

Q2.

1. Write a java function to calculate the value for a given position number on the following series (Fibonacci series) (12 marks)

1, 1, 2, 3, 5, 8.....

Example: If you pass 0 as the position- the function should return 1
 If you pass 1 as the position- the function should return 1
 If you pass 2 as the position- the function should return 2

2. Explain the difference between a class and an interface. (8 marks)
3. Java is platform independent language. What do you mean by platform independence? (5 marks)

Total: 25 marks

Q3.

1. What is the use of a try catch block in java program? (8 marks)
2. Consider the given program,

```
import java.io.*;

class Main{

    public static void main(String args[]) throws IOException
    {
        int n = 0;

        try{
            string input = args[0];
            System.out.println("input" + input);

        }catch(ArrayIndexOutOfBoundsException e){
            System.err.println(e+ "No input");
        }

        catch(NumberFormatException e){
            System.err.println(e+ "Could not be parsed");
        }

        finally{
            System.out.println("n" + n);
        }

        System.out.println("this follows the try catch statement");
    }
}
```

When you run the above program in the following 3 ways, (Assume your Main.java file exists on a drive called 'B:\'), State what will be the output for each command and give the reasons for your answers. (8 marks)

B:\>Java Main

B:\>Java Main #123

B:\>Java Main 123

3. Compare and contrast flow layout manager and grid layout manager. (9 marks)

Total 25 marks

Q4.

1. What is the output of this program? Explain your answer. (10 marks)

```
class main_class {  
    public static void main(String args[])  
    {  
        int x = 9;  
        if (x == 9) {  
            int x = 8;  
            System.out.println(x);  
        }  
    }  
}
```

2. Explain with an example what is a local variable and a global variable and how they differ from each other. (8 marks)
3. What is a java applet? Explain the usage of init, start, destroy, and paint methods in appletclass. (7 marks)

Total: 25 marks

.....*End of the paper*.....