



UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION SEMESTER II SESSION 2021/2022

- COURSE NAME : JAVA PROGRAMMING
- COURSE CODE : BIT 33803
- PROGRAMME CODE : BIT
- EXAMINATION DATE : JULY 2022
- DURATION : 3 HOURS
- INSTRUCTION :
1. ANSWERS **ALL** QUESTIONS.
 2. THIS FINAL EXAMINATION IS AN **ONLINE** ASSESSMENT AND CONDUCTED VIA **CLOSED BOOK**.
 3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK.

THIS QUESTION PAPER CONSISTS OF SIX (6) PAGES

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TERBUKA

Q1 A program contains the following method:

```
public static void display(int arg1, double arg2, char arg3)
{
    System.out.println("The value are " + arg1 + ", " + arg2 +
        ", and " + arg3); }
```

(a) Write a statement that invokes the above method and passes the following variables as arguments:

```
char init = 'R';
int age = 35;
double income = 7000.00;
```

(4 marks)

(b) What is the output if the method in **Q1(a)** is invoked?

(3 marks)

Q2 Consider the following program segment:

```
//import classes

public class Secret
{
    public static void main(String[] args)
    {
        //variable declaration
        //executable statements
    }
}
```

(a) Write a Java statement that imports the class `Scanner`.

(2 marks)

(b) Write a Java statement that declares `console` to be a `Scanner` object for inputting data from the standard input device.

(2 marks)

(c) Write a Java statement that declares the following variables: `num1` and `num2` of type `int`, `num3` and `num4` of type `double`.

(4 marks)

(d) Write Java statements that prompt the user to input two integers, store the first number into `num1`, and store the second number into `num2`.

(4 marks)

Q3 Consider the following Java code:

```
int lowerLimit;  
...  
try  
{  
    System.out.println("Entering the try block.");  
  
    if (lowerLimit < 100)  
        throw new Exception ("Lower limit violation.");  
    System.out.println("Exiting the try block.");  
}  
  
catch (Exception e)  
{ System.out.println("Exception : " + e.getMessage());  
}  
System.out.println("After the catch block");
```

- (a) What is the output if the value of lowerLimit is 50? (3 marks)
- (b) What is the output if the value of lowerLimit is 150? (3 marks)

Q4 Write necessary Java statements to create the following GUI components:

- (a) A JLabel with the text string "Enter your favorite food:". (2 marks)
- (b) A JButton with the text string "Click!". (2 marks)
- (c) The title "I Love Java Programming" for an existing window. (2 marks)

Q5 Write a Java statement that creates the output dialog box shown in **Figure Q5**.

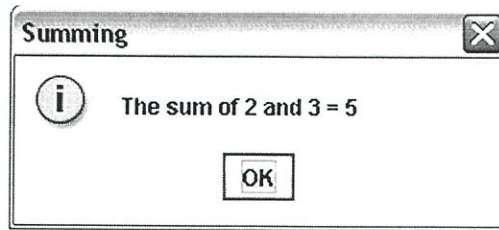


Figure Q5

(12 marks)

Q6 Given the following Java program to calculate the area of a circle. Define the constructor `Circle()` for above class `Circle()` to display the following GUI output as in **Figure Q6**:

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

public class Circle extends JFrame
{
    private JLabel radiusL, area;
    private JTextField radiusTF, areaTF;
    private JButton calculateB;
    private Container pane;
    private CalculateButtonHandler cbHandler;

    private static final int WIDTH = 300;
    private static final int HEIGHT = 100;

    public Circle ()
    {
        // Create GUI for class CircleProgram
    }

    public static void main(String[] args)
    {
        Circle cirObject = new Circle ();
    }
}
```

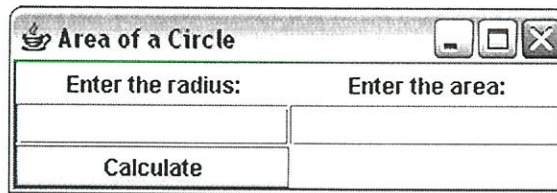


Figure Q6

(17 marks)



- Q7** Given the following Java program to convert a distance in kilometer to meter. The output of the program is as described in **Figure Q7**. Rewrite the class `KiloConverter` by completing the missing code lines in **Q7(a) – Q7(f)**:

```
public class KiloConverter extends JFrame implements ActionListener
{
    private JPanel panel;
    private final int width = 310;
    private final int height = 150;
    private int kilo, meter;

    public KiloConverter()
    {
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        buildPanel();
        add(panel);
        setVisible(true);
    }

    private void buildPanel()
    { panel = new JPanel();
      panel.add(msgLabel);
      panel.add(kiloTextField);
      panel.add(calcButton);
      panel.add(msgLabel2); }

    public void actionPerformed(ActionEvent e)
    { }

    public static void main(String args[])
    { }
}
```

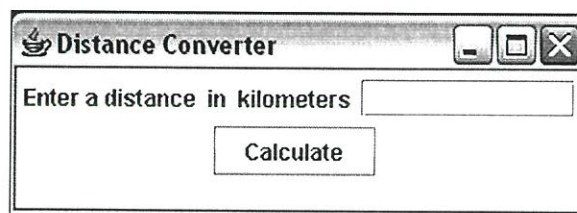


Figure Q7

- (a) Declaration of the instance variables for text field, button and labels. (3 marks)
- (b) Statements to set the title and size of the display window. (3 marks)

- (c) Statements in the method `buildPanel()` to display the text field and button as described in **Figure Q7**. (4 marks)
- (d) Statements in the method `buildPanel()` for the program to response to any action occurred on the text field and button. (4 marks)
- (e) Definition for the method `actionPerformed()` which obtains input from text field and converts the input from kilometer to meter. (4 marks)
- (f) Definition for the method `main()`. (2 marks)

-END OF QUESTIONS -