

Enrollment No.....



Faculty of Science

End Sem (Odd) Examination Dec-2018

BC3EC01 Programming in JAVA

Programme: B.Sc. (CS) Branch/Specialisation: Computer Science

Duration: 3 Hrs.**Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. With $x = 0$, which of the following are legal lines of Java code for changing the value of x to 1? **1**
 I. $x++$; II. $x = x + 1$; III. $x += 1$; IV. $x =+ 1$;
 (a) I, II and III (b) I and IV
 (c) I, II, III and IV (d) II and III
- ii. How can we identify whether a compilation unit is class or interface from a .class file? **1**
 (a) Java source file header
 (b) Extension of compilation unit
 (c) We cannot differentiate between class and interface
 (d) The class or interface name should be postfixed with unit type
- iii. What is false about constructor? **1**
 (a) Constructors cannot be synchronized in Java
 (b) Java does not provide default copy constructor
 (c) Constructor can be overloaded
 (d) "this" and "super" can be used in a constructor
- iv. What is the output of this program? **1**

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

 (a) 9 (b) 8
 (c) Compilation error (d) Runtime error

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- v. What exception thrown by parseInt() method? **1**
(a) ArithmeticException (b) ClassNotFoundException
(c) NullPointerException (d) NumberFormatException
- vi. Thread priority in Java is? **1**
(a) Integer (b) Float (c) Double (d) Long
- vii. What is the Message is displayed in the applet made by this program? **1**
import java.awt.*;
import java.applet.*;
public class myapplet extends Applet {
public void paint(Graphics g) {
g.drawString("A Simple Applet", 20, 20);
}
}
(a) A Simple Applet (b) A Simple Applet 20 20
(c) Compilation Error (d) Runtime Error
- viii. Which of these functions is called to display the output of an applet? **1**
(a) display() (b) paint()
(c) displayApplet() (d) PrintApplet()
- ix. What is a listener in context to event handling? **1**
(a) A listener is a variable that is notified when an event occurs
(b) A listener is a object that is notified when an event occurs
(c) A listener is a method that is notified when an event occurs
(d) None of these
- x. The following are the advantages of _____. **1**
I. It is lightweight.
II. It supports pluggable look and feel.
III. It follows MVC (Model View Controller) architecture.
(a) Swing (b) AWT
(c) Both (a) and (b) (d) None of these

- Q.2 i. Explain the following in brief: **4**
(a) JVM
(b) JRE
- ii. What is the purpose of "this" keyword? Explain it with the help of example. **6**

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- OR iii. Write a java program to print odd and even numbers from an array. **6**
- Q.3 i. What do you mean by Jagged array? **3**
ii. Write a program to perform different operations on Strings using methods of String class. (at least 8 methods) **7**
- OR iii. What is constructor overloading? Explain it by using suitable example. **7**
- Q.4 i. Explain the lifecycle of a thread. **3**
ii. What are the uses of exception handling in Java? Write a program using Java that handles an exception "Entry of negative age of a person" **7**
- OR iii. Write steps for creating child threads using thread class and runnable interface. Write a program for any one. **7**
- Q.5 i. Explain the AWT Class hierarchy. **4**
ii. What do you mean by layout manager? Explain Border layout using suitable example. **6**
- OR iii. Explain any three AWT controls using suitable example. **6**
- Q.6 i. What is Event-Dispatcher-Thread (EDT) in Swing? **3**
ii. Write a program to create calculator for addition, subtraction, multiplication and division using swing control. **7**
- OR iii. What are the major components of java's event delegation model? Briefly explain. **7**
