SL NO of QP : 3560

Unique Paper Code   :   6202451202

Name of the Paper   :   PROGRAMMING IN JAVA

Name of the Course   :   **B.Voc.**

Semester   :   I

Duration   :   2 Hours

Maximum Marks   :   60

Instructions for Candidates:-

1. Write your Roll no. on the top immediately on receipt of this question paper.
2. Attempt total 4 questions. **Q1 is compulsory to attend**. Rest, Attempt any 3 questions more.

(15 x 4 = 60 marks)

Q1. A) Create a java program to display "Welcome World" using Class, Object and Method.   [3M]

B) Fill in the blanks: [2M]

    i.   The ____ keyword is used to exit a loop prematurely.
    ii.   Inheritance allows a class to inherit properties and methods from another class called the ____ class.

C)   What are the containers available in swing? [2M]

D) What is the significance of Java's byte code? [2M]

E) List any three built-in exceptions in Java. [3M]

F) Write a Java program to create AWT radio buttons using check box group. [3M]

Q2.A) Explain the various event listener interfaces.   Write an Applet to draw a smiley picture accept user name as a parameter and display welcome message. [10M]

B) Specify the following statements are True/False . [5M]
    i. In an instance method or a constructor, "this" is a reference to the current object.
    ii. Constructor overloading is not possible in Java.
    iii. Variable name can begin with a letter, "$", or "_".
    iv. Interfaces can be instantiated.
    v. AWT is heavy weight and SWING is light weight.

Q3. What will be the output of following codes: [15M]

A) **CODE 1:**   **[5M]**

Given:

```java
class Vehicle {
    String type = "4W";
    int maxSpeed = 100;

    Vehicle(String type, int maxSpeed) {
        this.type = type;
        this.maxSpeed = maxSpeed;
    }
    Vehicle() {}
}

class Car extends Vehicle {
    String trans;

    Car(String trans) {              //line n1
        this.trans = trans;
    }

    Car(String type, int maxSpeed, String trans) {
        super(type, maxSpeed);       // line n2
        this.trans = trans;
    }
}
```

And given the code fragment:

```java
7. Car c1 = new Car("Auto");
8. Car c2 = new Car("4W", 150, "Manual");
9. System.out.println(c1.type + " " + c1.maxSpeed + " " + c1.trans);
10. System.out.println(c2.type + " " + c2.maxSpeed + " " + c2.trans);
```

What is the result?

B) CODE 2 : [5M]

```java
public static void main(String[] args) {
    StringBuilder sb = new StringBuilder("Java");
    String s = "Java";

    if (sb.toString().equals(s.toString())) {
        System.out.println("Match 1");
    } else if (sb.equals(s)) {
        System.out.println("Match 2");
    } else {
        System.out.println("No Match");
    }
}
```

What is the result?

C) CODE 3 : [5M]

```java
public class Test
{
    public int aMethod()
    {
        static int i =
        0; i++;
        return i;
    }
    public static void main(String args[])
    {
        Test test = new
        Test();
        test.aMethod();
        int j = test.aMethod();
        System.out.println(j);
    }
}
```

Q4.A) What are the 4 pillars of OOPS. Explain with example of each. [10M]

B) Write a java program to check the given string is palindrome or not. [5M]

Q5. A) What is a Constructor? Explain types of Constructors in Java? Write a java program to find the Area of Circle using Constructor. [10M]

B) Discuss the use of following keywords in java (ANY TWO): [5M]

    i.   This
    ii.   Switch
    iii. Final
    iv.   Static
    v.   Super

Q6. A) Which inheritance is not supported by JAVA. How that unsupported inheritance can be attained indirectly? Write a program for the same as example. [10M]

B) Explain the various access specifiers are used in java with examples. [5M]