

1. Which one of the following data types can store only true or false values?
 - i) Char
 - ii) Int
 - iii) Float
 - iv) Boolean
2. John wants to create a class in which he wants to hide its member variables from all other classes. Which one of the access specifiers should he use?
 - a. Public
 - b. Protected
 - c. Private
 - d. Default
3. Predict the output of the following code

```
package demo;
public class Demo
{
    final static short x =2;
    public static int y =0;
    public static void main(String arg[]){
        for(int z=0;z<3;z++){
            switch(z){
                case x:
                    x=x+1;
                    break;
                case x-1:
                    System.out.print("x is"+x);
                    break;
                default:
                    System.out.print("y is"+y);
            }
        }
    }
}
```
4. Which one of the following types of operators is used to evaluate operands and return a Boolean value?
 - i) Arithmetic
 - ii) Comparison
 - iii) Shift
 - iv) Unary
5. You have created a switch construct with five case constants. Now you want to ensure that only one case constant is executed if the value matches. How can you achieve the same?
 - i) By adding if statement
 - ii) By adding break statement
 - iii) By adding for statement
 - iv) By adding continue statement

6. Predict the output of the following code

```
package demo;

public class Demo
{
    public static void main(String arg[]){
        {
            int direction = 3;

            String str;

            switch(direction){
                case 1:
                    str = "South";
                    break;
                case 2:
                    str = "north";
                    break;
                case 3:
                    str = "East";
                    break;
                case 4:
                    str = "west";
                    break;
                default:
                    str = "Invalid direction";
                    break;
            }

            System.out.println(str);
        }
    }
}
```

7. Which one of the following options defines a fixed set of constants?
- a. Variable
 - b. String
 - c. Array
 - d. Enum
8. Mark has been assigned the task of converting the enum constants into string object. Identify the method that will help him to achieve the same
- a. `valueOf()`
 - b. `valueAt()`
 - c. `valueIn()`
 - d. `values()`
9. Predict the output of the following code

```
package demo;

class Demo

{

    public static void main(String arg[]){

        String str1 = new String("TECHNOLOGY");

        String str2 = new String("TECHNOLOGY");

        If(str1==str2)

        {

            System.out.println("str1 == str2 : true");

        }

        Else if(str1.equals(str2))

        {

            System.out.println("str1 equals str2 : true");

        }

        Else

        {

            System.out.println("false");

        }

    }

}
```

10. Identify the keyword that allows you to use an interface with a class

- i) Base
- ii) Derive
- iii) Extends
- iv) Implements

11. Predict the output of the following code

```
package parents;
public class Parent
{
    public void show()
    {
        System.out.println("Parent class method ");
    }
}
class Child extends Parents
{
    public void show()
    {
        System.out.println("child class method");
    }
    public static void main(String arg[]){
        Child d = new Child();
        Parent p = new Child();
        d.show();
        p.show();
    }
}
```

12. Drake has written the following code

```
package main;
interface shapeA
{
    public String baseclass = "Drawing circle";
    public void Draw();
}
interface shapeB extends shapeA
{
    public String baseclass = "Drawing Oval";
    public void Draw2();
}
class circle implements shapeA, shapeB
{
    public void Draw()
    {
        System.out.println(shapeA.baseclass);
    }
}
```

```

public void Draw2()
{
    System.out.println(shapeB.baseclass);
}
}
public class Main
{
    public static void main(String arg[])
    {
        ShapeA circlesshape = new shapeA();
        Circleshape.Draw();
    }
}

```

However, the preceding code results in a compilation error. Identify the line that causes the error and provide the solution to rectify it.

13. Rick has created a Java program where he needs to implement exception handling. Which one of the following blocks should he use to monitor the code that can generate exception?

- i) Throws
- ii) Try
- iii) Catch
- iv) Throw

14. Consider the following code

```

import java.util.*;
class Sample
{
    public void showMenu()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("-----Menu-----");
        System.out.println("1. Play");
        System.out.println("2. Instructions");
        System.out.println("3. Quit");
        System.out.println("\nChoose the option:");
        int opt = sc.nextInt();
        assertion(opt>0 && opt<4):"Please enter a value in the range of 1-3";
        switch(opt)
        {
            case 1:
                break;
            case 2:
                break;
            case 3:
                System.exit(0);
                break;
        }
    }
}

```

```
}  
}
```

15. Which one of the following components class contains the `getSelectedValues()` method?

- i) `Jlist`
- ii) `Jbutton`
- iii) `Jradiobutton`
- iv) `Jcombobox`

16. Sam wants to place 10 buttons in two rows and five columns with in the frame. Identify the layout manager which he should use for the same.

- i) `FlowLayout`
- ii) `Borderlayout`
- iii) `GridLayout`
- iv) `Boxlayout`

17. Predict the output of the following code

```
import javax.swing.JFrame;  
public class FrameDemo  
{  
    public static void main(String arg[])  
    {  
        JFrame f = new JFrame("FrameDemo");  
        f.setBounds(250,100,350,400);  
        f.setVisible(true);  
    }  
}
```

18. Which one of the following event classes provides the `isTemporary()` method?

- i) `FocusEvent`
- ii) `MouseEvent`
- iii) `ActionEvent`
- iv) `KeyEvent`

19. Donald needs to develop an application in which he wants a user to fill the registration form. Thereafter, he wants the user to click the submit button. On clicking the submit button, Donald wants to validate the entries. Identify the event listener he should use to achieve the preceding requirement.

- i) `ActionListener`
- ii) `MouseListener`
- iii) `WindowListener`
- iv) `FocusListener`

20. Consider the following code

```
import java.awt.*;  
import java.awt.event.*;  
import javax.swing.*;  
public class EmployeeForm implements FocusListener  
{  
    JTextField fname,lname;  
    JFrame form;
```

```

public EmployeeForm()
{
    form = new JFrame("Employee Form");
    form.setLayout(new FlowLayout());
    form.setSize(200,300);
    fname = new JTextField();
    lname = new JTextField();
    form.add(fname);
    form.add(lname);
    form.setVisible(true);
    fname.addFocusListener(this);
    lname.addFocusListener(this);
}
Public void focusGained(FocusEvent e)
{
    if(e.getSource() == fname)
        System.out.println("enter first name");
    If(e.getSource() == lname)
        System.out.println("enter last name");
}
}

```

21. Which one of the following statements is true regarding the static inner class?
- i) It must extend the enclosing class
 - ii) It's variable and methods must be static
 - iii) It does not have direct access to nonstatic members of the enclosing class
 - iv) It must have public access specifier

22. Predict the output

```

class InnerClass2
{
    int x=30;
    void display()
    {
        final int y=50;
        class Local
        {
            void msg()
            {
                int x = 25;
                System.out.println("value of x is:"+x);
                System.out.println("value of y is:"+y);
            }
        }
        Local l = new Local();
        l.msg();
    }
}

```

```

public static void main(String arg[])
{
    InnerClass2 obj = new InnerClass2();
    Obj.display();
}
}

```

23. Which one of the following regular expressions will match only the words "bat", "cat", or "rat"?
- [bcr]at
 - [b-c-r][at]
 - [b-r]at
 - [bcr][at]
24. Which one of the following statements is true regarding locale?
- The language value of a locale always uses uppercase
 - A locale is specified by using the language, region, and country values
 - A locale is specified by using the language and country values
 - The country value of a locale always uses lowercase
25. Consider the following code snippet that uses Locale objects to change the current locale
- ```

Locale frLocale = Locale.FRANCE;
Locale ruLocale = new Locale("ru", "RU");
Locale currentLocale;
frLocale = ruLocale;
currentLocale = frLocale;
System.out.println(currentLocale);

```
- The code will generate the following output:  
Fr\_FR
  - The code will generate compile-time error
  - The code will generate run-time exception
  - The code will generate the following output:  
ru\_RU
26. Which one of the following statement is true regarding the generic method?
- Generic method can be created inside generic class or non generic class
  - Generic method can be created only inside an generic or non generic interface
  - Generic method can only be created inside non generic class
  - Generic method can only be created inside generic class
27. Which one of the following code snippet correctly demonstrate the use of the diamond operator?
- Color<> obj = new Color<>();
  - Color<> obj = new Color<Integer>();
  - Color<Integer> obj = new Color<Integer>();
  - Color<Integer> obj = new Color<>();
28. Which one of the following interface enables you to create a collection of key-value pair objects?
- Set
  - Map



- iii) Deque
- iv) List

29. Aiden created the following code snippet to implement the set interface in java

```
Set<String> set = new TreeSet<>();
set.add("Pink");
set.add("Red");
set.add("Blue");
```

what will happen if Aiden adds the following statement to the preceding code snippet?

```
Set.add("Blue");
```

- i) The code snippet will result in runtime error
- ii) The code snippet will result in compile-time error
- iii) The code snippet will compile and run successfully, but will not add the element "Blue" again to the set
- iv) The code snippet will compile and run successfully, and will add all the elements to the set

30. 

```
import java.util.*;
public class Student
{
 private String name;
 private int marks;
 public Students(String nm,int mk)
 {
 this.name = nm;
 this.marks = mk;
 }
 public int getMarks()
 {
 return marks;
 }
 public String getName()
 {
 return name;
 }
 public void setName(String name){
 this.name = name;
 }
 public String toString()
 {
 StringBuffer buffer = new StringBuffer();
 Buffer.append(name);
 return buffer.toString();
 }
}
```

```
}
```

In addition, the following code is used written inside the main method of Test class:

```
ArrayList al = new ArrayList();
al.add(new Student("Mark", 89));
al.add(new Student("Clark", 90));
Collections.sort(al);
System.out.println(al);
```

However, when the Test class is executed, exception is throw. Identify the solution such that the preceding code executes successfully