PROGRAMMING IN JAVA

Assignment 08

TYPE OF QUESTION: MCQ

Number of questions: 10   Total marks**: 10 × 1 = 10**

QUESTION 1:

What does AWT stand for in Java?

    a. **Applet Windowing Toolkit**

    b. **Abstract Window Toolkit**

    c. **Absolute Windowing Toolkit**

    d. **Amazing Window Toolkit**

Correct Answer:

    b. **Abstract Window Toolkit**

Detailed Solution:

The Abstract Window Toolkit (AWT) is Java's original platform-dependent windowing, graphics, and user-interface widget toolkit, preceding Swing.

QUESTION 2:

In Java, what is the purpose of a Card Layout?

    a. **To create a card game interface**

    b. **To arrange components in a card-like fashion**

    c. **To manage multiple panels within a single container**

    d. **To display images of cards**

Correct Answer:

    c. **To manage multiple panels within a single container**

Detailed Solution:

Card Layout allows you to manage multiple panels within a single container, where only one panel is visible at a time.

QUESTION 3:

Which layout manager divides the container into five regions: North, South, East, West, and Center?

    a. **Border Layout**

    b. **Grid Layout**

    c. **Flow Layout**

    d. **Card Layout**

Correct Answer:

    a. **Border Layout**

Detailed Solution:

Border Layout divides the container into five regions, and components can be added to each region: North, South, East, West, and Center.

QUESTION 4:

In Java, what is the primary purpose of a layout manager?

a. **To manage memory allocation**

b. **To arrange GUI components within a container**

c. **To handle exception handling**

d. **To control database connections**

Correct Answer:

b. **To arrange GUI components within a container**

Detailed Solution:

A layout manager in Java is responsible for arranging and positioning GUI components within a container.

QUESTION 5:

What will be the output of the Java code given below?

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

public class ButtonExample extends Frame {
    public static void main(String[] args) {
        ButtonExample frame = new ButtonExample();
        Button b = new Button("Programming in Java - 2024");
        b.setBounds(30, 50, 80, 30);
        frame.add(b);
        frame.setSize(300, 200);
        frame.setLayout(null);
        frame.setVisible(true);
    }
}
```

a. **Compilation error**

b. **An empty frame with no button**

c. **A frame with a button "Programming in Java - 2024" at coordinates (30, 50)**

d. **A frame with a button, but not at the specified coordinates**

Correct Answer:

c. **A frame with a button "Programming in Java - 2024" at coordinates (30, 50)**

Detailed Solution:

The code creates a frame and adds a button with the label "Programming in Java - 2024" at coordinates (30, 50).

QUESTION 6:

Which layout manager arranges components in a top-to-bottom flow, adding them to the next available position?

      a. **Grid Layout**

      b. **Flow Layout**

      c. **Border Layout**

      d. **Card Layout**

Correct Answer:

      b. **Flow Layout**

Detailed Solution:

Flow Layout arranges components in a top-to-bottom, left-to-right flow, adding them to the next available position in the container.

QUESTION 7:

What is the significance of AWT components being heavyweight?

    a. **They have higher memory requirements**

    b. **They are slower in performance**

    c. **They are dependent on the underlying operating system**

    d. **They are easier to customize**

Correct Answer:

    c. **They are dependent on the underlying operating system**

Detailed Solution:

AWT components being heavyweight means they rely on the native components of the underlying operating system, which can affect their appearance and behavior.

QUESTION 8:

Which AWT concept allows you to handle events such as button clicks or mouse movements?
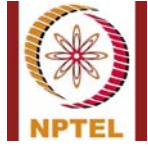
    a. **Event Handling**

    b. **Function Overloading**

    c. **Mouse Manager**

    d. **GUI Processing**

Correct Answer:

    a. **Event Handling**

Detailed Solution:

Event Handling in AWT enables the response to user actions, such as button clicks or mouse movements, in a graphical user interface.

QUESTION 9:

Which layout manager organizes components in a grid, with each cell of the grid containing a component?

      a. **Flow Layout**

      b. **Grid Layout**

      c. **Border Layout**

      d. **Card Layout**

Correct Answer:

      b. **Grid Layout**

Detailed Solution:

Grid Layout organizes components in a grid, and each cell of the grid contains a component. Components are added in a left-to-right, top-to-bottom order.

QUESTION 10:

What is the layout manager used in the Java code given below?

```java
import java.awt.*;

public class LayoutExample extends Frame {
    public static void main(String[] args) {
        LayoutExample frame = new LayoutExample();
        Button b1 = new Button("Button 1");
        Button b2 = new Button("Button 2");
        Button b3 = new Button("Button 3");
        frame.add(b1);
        frame.add(b2);
        frame.add(b3);
        // create a flow layout
        frame.setLayout(new FlowLayout());
        frame.setLayout(new GridLayout(2, 2));
        frame.setSize(300, 200);
        frame.setVisible(true);
    }
}
```

a. **Grid Layout**

b. **Border Layout**

c. **Flow Layout**

d. **Card Layout**

Correct Answer:

a. **Grid Layout**

Detailed Solution:

The code sets the layout manager of the 1frame to a 2x2 grid layout using `frame.setLayout(new GridLayout(2, 2))`. The FlowLayout gets overridden by the GridLayout, you can try to comment out the GridLayout line to see the difference.