

### NPTEL Online Certification Courses

## Indian Institute of Technology Kharagpur NOC24-CS105 (July-2024 24A)



### PROGRAMMING IN JAVA

## Assignment 08

TYPE OF QUESTION: MCQ

Number of questions:  $10 \times 1 = 10$ 

### **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

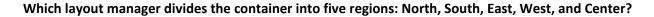
### **Detailed Solution:**

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





### **QUESTION 3:**



- 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:**

void setBounds(int x, int y, int width, int height);

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

```
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 movemen
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- 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?

```
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.