0404N76

Candidate's Seat No :_____

B.Sc Semester-6 Examination
CC 308
Computer Science

Time : 2-30 Hours]

April-2024

[Max. Marks : 70

Q1(A) What is an exception in Java, and why is exception handling necessary in programming?

Q1(B) Explain the difference between checked and unchecked exceptions in Java with examples. (7)

(7)

OR

Q1(A) Describe the purpose of the try-catch block in Java exception handling and provide an example of its usage.

Q1(B) How does the finally block contribute to Java exception handling? Illustrate its usage in a scenario. (7)

(7)

Q2(A) Discuss the role of the throw and throws keywords in Java exception handling, and provide examples of their usage.

Q2(B) Describe the hierarchy of exception classes in Java and their relationships, including the Throwable, Exception, and Error classes. (7)

(7)

OR

Q2(A) Compare and contrast the usage of try-catch-finally blocks and try-with-resources statement in Java exception handling.

Q2(B) How can you handle multiple exceptions in a single catch block in Java? Provide an example demonstrating the usage of multi-catch blocks. (7)

(7)

Q3(A) Explain what a Java applet is and how it differs from a standalone Java application. Provide an example of a situation where using a Java applet would be more suitable than a standalone application.

Q3(B) Discuss the lifecycle of a Java applet in detail. Describe each phase and explain what happens during initialization, start, stop, and destroy phases. (7)

(7)

OR

Q3(A) How can you embed a Java applet into an HTML webpage? Provide a step-by-step explanation along with an example HTML code snippet.

Q3(B) What are the advantages and disadvantages of using Java applets compared to other web technologies like JavaScript and HTML5? Discuss factors such as security, performance, and cross-platform compatibility. (7)

(7)

Q4(A) Explain the concept of event handling in AWT controls. Discuss its significance in graphical user interface (GUI) programming. Provide examples to illustrate your points.

Q4(B) Describe the role of event listeners in AWT event handling. Discuss the different types of event listeners available in AWT and their respective purposes. (7)

(7)

OR

Q4(A) Discuss the event propagation model in AWT. Explain how events are generated, propagated, and handled in AWT controls. Provide a detailed example to illustrate the event propagation process. (7)

Q4(B) Explain the concept of event delegation in AWT event handling. Discuss how event delegation improves the efficiency and scalability of GUI applications. Provide examples to demonstrate the use of event delegation in AWT controls. (7)

Q5 **MCQ Attempt any seven out of twelve.(2 Marks each)** **(14)**

1) What is a Java applet?
A) A stand-alone application
B) A small program that runs within a web browser
C) A server-side script
D) A database management tool

2) Which of the following is true about Java applets?
A) They require compilation before execution
B) They are primarily used for server-side scripting
C) They can be run on any operating system without any setup
D) They are designed to be standalone applications

3) What language are Java applets typically written in?
A) Java B) HTML C) Python D) JavaScript

4) Which method is used to initialize an applet?
A) init() B) start() C) run() D) main()

5) Which method is automatically called when an applet is started?
A) init() B) start() C) run() D) begin()

6) Which method is responsible for drawing graphics within an applet?
A) draw() B) render() C) paint() D) display()

7) What is the default size of an applet window if not specified?
A) 300x200 pixels B) 200x200 pixels C) 400x300 pixels D) 500x400 pixels

8) Which tag is used to embed a Java applet in an HTML page?
A) <java> B) <applet> C) <script> D) <embed>

9) What is Java Swing?
A) A dance form
B) A programming framework for building graphical user interfaces (GUIs) in Java
C) A type of coffee
D) A tool for web development

10) Which component is used to display a single-line editable text field in Java Swing?
A) JTextArea B) JList C) JTextField D) JComboBox

11) Which Swing class is used to create a window with a title bar and borders?
A) JFrame B) JPanel C) JWindow D) JDialog

12) Which method is used to add components to a container in Java Swing?
A) add() B) insert() C) append() D) attach()

BEST OF LUCK