

KAMARAJ COLLEGE (Autonomous)

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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(3 Pages)

Reg. No:.....

Question Code: 26E01110

Course Code : 24UMCS41

UG Degree - End Semester Examinations, April 2026

Fourth Semester

B.Sc COMPUTER SCIENCE

Java Programming

(For those who joined in July 2024 onwards)

Time : 3Hours

Maximum : 75 Marks

PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

- CO:1 1. Which concept of OOP allows code reusability?
K:1 (a) Encapsulation (b) Abstraction
(c) Inheritance (d) Polymorphism
- CO:1 2. Which variable scope is limited to a method?
K:2 (a) Instance variable (b) Static variable
(c) Local variable (d) Global variable
- CO:2 3. Which inheritance involves one base class and multiple derived classes?
K:1 (a) Single (b) Multilevel
(c) Hierarchical (d) Multiple
- CO:2 4. Which access specifier allows access within the same package and subclasses?
K:1 (a) private (b) public
(c) protected (d) default
- CO:3 5. Which keyword is used to declare exceptions in a method signature?
K:1 (a) try (b) catch
(c) throw (d) throws
- CO:3 6. Which situation leads to deadlock?
K:1 (a) Thread sleep (b) Improper resource allocation
(c) Thread yield (d) Thread priority

- CO:4 7. Why are byte streams used in Java?
K:2 (a) To process text only (b) To process Unicode characters
(c) To process raw binary data (d) To improve GUI data
- CO:4 8. Which package contains event handling classes?
K:1 (a) java.lang (b) java.io
(c) java.util (d) java.awt.event
- CO:5 9. Which AWT component supports both vertical and horizontal scrolling automatically?
K:1 (a) Scrollbar (b) ScrollPane
(c) Panel (d) List
- CO:5 10. Which method is used to apply a font to a component?
K:1 (a) applyFont() (b) addFont()
(c) setFont() (d) changeFont()

PART - B (5 X 5 = 25 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 250 words.

- CO:1 11. (a) Explain the four basic Object-Oriented Programming
K:2 concepts with suitable Java examples.

(OR)

- (b) Illustrate Java operators and their role in control statements.

- CO:2 12. (a) Define the final keyword in Java with examples.
K:3

(OR)

- (b) Define an interface in Java and explain its implementation.

- CO:3 13. (a) Explain the usage of throw and throws keywords with
K:2 suitable examples.

(OR)

- (b) Outline inter-thread communication using wait(), notify() and notifyAll() methods.

- CO:4 14. (a) Explain the concept of streams in Java. Differentiate
between byte streams and character streams.

K:2

(OR)

(b) Infer the Event Delegation Model (EDM) with a neat diagram.

CO:5 15. (a) Construct Checkboxes and Radio Buttons in AWT.

K:3

(OR)

(b) Apply how to create a Frame in AWT and add components to it.

PART - C (5 X 8 = 40 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 500 words.

CO:1 16. (a) Classify the architecture of Java Virtual Machine (JVM) with
K:4 neat diagram.

(OR)

(b) Categorize data types and variables in Java. Analyze the scope and lifetime of variables.

CO:2 17. (a) Experiment with the types of inheritance in Java with
K:3 suitable examples.

(OR)

(b) Apply importing of packages in Java. Discuss different ways of importing packages with examples.

CO:3 18. (a) Build built-in exceptions in Java with suitable examples.

K:3

(OR)

(b) Apply synchronization in Java. Discuss synchronized methods and synchronized blocks with examples.

CO:4 19. (a) Analyze File Reader and File Writer classes with suitable
K:4 examples.

(OR)

(b) Compare mouse and keyboard events in Java with relevant listener interfaces.

CO:5 20. (a) Assess the AWT class hierarchy and describe various AWT
K:5 components.

(OR)

(b) Estimate the various layout managers used in AWT.