

MODEL PAPER – 1
B.Sc Computer Science – Semester IV
Paper: Programming in Java
Time: 3 Hours | Max Marks: 80

SECTION – A: SHORT ANSWER QUESTIONS

Answer any EIGHT questions ($8 \times 4 = 32$ Marks)

1. List features of Java
2. What is bytecode?
3. Define class and object
4. What is constructor?
5. Define inheritance
6. What is method overloading?
7. Define interface
8. What is exception handling?
9. Define thread
10. What is synchronization?
11. Define collection framework
12. What is event handling?

◆ **SECTION – B: ESSAY TYPE QUESTIONS**

Answer ALL questions ($4 \times 12 = 48$ Marks)

13. (a) Explain structure of Java program and data types
OR
(b) Explain classes, objects, constructors, and access modifiers
14. (a) Explain inheritance and types with examples
OR
(b) Explain polymorphism (method overloading and overriding)
15. (a) Explain multithreading and thread life cycle
OR
(b) Explain Java collections (List, Set, Map) with examples
16. (a) Explain exception handling (try, catch, throw, throws, finally)
OR
(b) Explain Swing components and event handling

MODEL PAPER – 2
B.Sc Computer Science – Semester IV
Paper: Programming in Java
Time: 3 Hours | Max Marks: 80

SECTION – A: SHORT ANSWER QUESTIONS

Answer any EIGHT questions ($8 \times 4 = 32$ Marks)

1. Define Java and list its features
 2. What is JVM?
 3. Define access modifiers
 4. What is this keyword?
 5. Define method overriding
 6. What is abstract class?
 7. Define package
 8. What is checked exception?
 9. Define thread life cycle
 10. What is ArrayList?
 11. Define File class
 12. What is JFrame?
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◆ SECTION – B: ESSAY TYPE QUESTIONS

Answer ALL questions ($4 \times 12 = 48$ Marks)

13. (a) Explain structure of Java program and variables
OR
(b) Explain classes, objects, constructors, and this keyword
14. (a) Explain inheritance and use of super and final
OR
(b) Explain polymorphism (method overloading and overriding) with examples
15. (a) Explain multithreading, thread creation, and synchronization
OR
(b) Explain collection framework and working of List, Set, Map
16. (a) Explain exception handling with types of exceptions and examples
OR
(b) Explain Swing components and event handling mechanism

MODEL PAPER – 3
B.Sc Computer Science – Semester IV
Paper: Programming in Java
Time: 3 Hours | Max Marks: 80

SECTION – A: SHORT ANSWER QUESTIONS

Answer any EIGHT questions ($8 \times 4 = 32$ Marks)

1. What are tokens in Java?
 2. Define bytecode and JVM
 3. What is a constructor?
 4. Define static and final variables
 5. What is method overloading?
 6. Define interface and its use
 7. What is exception hierarchy?
 8. Define thread and multithreading
 9. What is synchronization?
 10. Define iterator
 11. What is serialization?
 12. What is event listener?
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◆ SECTION – B: ESSAY TYPE QUESTIONS

Answer ALL questions ($4 \times 12 = 48$ Marks)

13. (a) Explain Java features, program structure, and control statements
OR
(b) Explain classes, objects, constructors, and access modifiers
14. (a) Explain inheritance, abstract classes, and interfaces
OR
(b) Explain polymorphism (method overloading and overriding) with examples
15. (a) Explain thread life cycle, thread creation, and synchronization
OR
(b) Explain Java collections framework and working of ArrayList, HashSet, and HashMap
16. (a) Explain exception handling with try, catch, throw, throws, finally
OR
(b) Explain Swing components and event handling with examples

MODEL PAPER – 4
B.Sc Computer Science – Semester IV
Paper: Programming in Java
Time: 3 Hours | Max Marks: 80

SECTION – A: SHORT ANSWER QUESTIONS

Answer any EIGHT questions ($8 \times 4 = 32$ Marks)

1. Define JVM and JDK
 2. What are Java tokens?
 3. Define constructor overloading
 4. What is this keyword?
 5. Define inheritance
 6. What is abstract class?
 7. Define exception and error
 8. What is finally block?
 9. Define thread priority
 10. What is LinkedList?
 11. Define File I/O in Java
 12. What is ActionListener?
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◆ SECTION – B: ESSAY TYPE QUESTIONS

Answer ALL questions ($4 \times 12 = 48$ Marks)

13. (a) Explain Java features, data types, and control statements
OR
(b) Explain classes, objects, constructors, and access modifiers
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14. (a) Explain inheritance, super keyword, and abstract classes
OR
(b) Explain polymorphism (overloading and overriding) with examples

15. (a) Explain thread creation methods and synchronization
OR
(b) Explain Java collection framework and working of List and Set

16. (a) Explain exception handling with types and examples
OR
(b) Explain Swing components and event handling mechanism

MODEL PAPER – 5
B.Sc Computer Science – Semester IV
Paper: Programming in Java
Time: 3 Hours | Max Marks: 80

SECTION – A: SHORT ANSWER QUESTIONS

Answer any EIGHT questions ($8 \times 4 = 32$ Marks)

1. Define Java and its platform independence
 2. What is bytecode?
 3. Define class and method
 4. What is static variable?
 5. Define method overriding
 6. What is interface?
 7. Define exception handling
 8. What is checked exception?
 9. Define multithreading
 10. What is synchronization?
 11. Define ArrayList
 12. What is event handling?
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◆ SECTION – B: ESSAY TYPE QUESTIONS

Answer ALL questions ($4 \times 12 = 48$ Marks)

13. (a) Explain Java features, structure of Java program, and data types
OR
(b) Explain classes, objects, constructors, and access modifiers with examples
14. (a) Explain inheritance, types of inheritance, and use of super and final
OR
(b) Explain polymorphism (method overloading and overriding) with examples
15. (a) Explain multithreading, thread life cycle, and synchronization with example
OR
(b) Explain collection framework and working of List, Set, and Map
16. (a) Explain exception handling (try, catch, throw, throws, finally) with examples
OR
(b) Explain Swing components and event handling with example

UNIT WISE IMPORTANT QUESTIONS

UNIT – I (Java Basics + OOP)

- Features of Java ★★★★★
- Structure of Java program ★★★★★★
- Data types and variables ★★★★★
- Operators and expressions ★★★★★
- Control statements ★★★★★
- Classes and objects ★★★★★★
- Constructors ★★★★★
- Access modifiers ★★★★★★
- this keyword ★★★★★
- String vs StringBuffer vs StringBuilder ★★★★★★
- Garbage collection ★★★★★

UNIT – II (Inheritance, Polymorphism, Exception)

- Types of inheritance ★★★★★
- super and final keyword ★★★★★
- Method overloading vs overriding ★★★★★★
- Abstract classes ★★★★★★
- Interfaces ★★★★★★
- Packages (creation & usage) ★★★★★
- Exception handling (try, catch, throw, throws, finally) ★★★★★★
- Checked vs unchecked exceptions ★★★★★★
- Custom exceptions ★★★★★

UNIT – III (Multithreading + Collections + I/O)

- Thread life cycle ★★★★★★
- Creating threads (Runnable / Thread class) ★★★★★★
- Synchronization ★★★★★★
- Collection framework ★★★★★★
- List, Set, Map ★★★★★★
- ArrayList vs LinkedList ★★★★★★
- Iterator ★★★★★
- File handling (byte vs character streams) ★★★★★★

UNIT – IV (Swing + JavaFX)

- Swing components (JFrame, JButton, etc.) ★★★★★★
- Event handling ★★★★★★
- Event listener interfaces ★★★★★★

- Mouse & keyboard events ★★★★★
- JavaFX basics ★★★★★
- Layout managers (VBox, HBox, GridPane) ★★★★★
- Controls and styling ★★★★★
- Animation & transitions ★★★★★



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