



University of Engineering & Management, Kolkata

End Semester Examination, November - December, 2022

**Programme Name: B.Tech in CSE/CSE(AIML)/CSE(IOT)/CSBS
Semester: 3rd**

Course Name: Object Oriented Programming using JAVA

Course Code: PCCCSE302

Full Marks: 100

Time: 3 Hours

Group - A

Answer 10 questions. Each question carries 2 marks. (2 × 10)

- | | | |
|-------------|--|-------------------------|
| 1.A. | Explain meta class in java. | 2,CO2,Understand |
| | Or | |
| 1.B. | Explain the syntax of Buffered Reader object creation. | 2,CO2,Understand |
| 2.A. | Explain the term generalization. | 2,CO2,Understand |
| | Or | |
| 2.B. | Describe the concept of inheritance with a code snippet. | 2,CO2,Understand |
| 3.A. | What is method overloading? | 2,CO1,Remember |
| | Or | |
| 3.B. | State various features of JAVA. | 2,CO1,Remember |
| 4.A. | List 4 defined packages in JAVA. | 2,CO1,Remember |
| | Or | |
| 4.B. | What are wrapper classes in Java? | 2,CO1,Remember |
| 5.A. | What is this keyword in java? | 2,CO1,Remember |
| | Or | |
| 5.B. | What is an association? | 2,CO1,Remember |
| 6.A. | State the typical responsibilities of JVM. | 2,CO1,Remember |
| | Or | |
| 6.B. | Define Package in JAVA. | 2,CO1,Remember |
| 7.A. | What is Thread Priority? | 2,CO1,Remember |
| | Or | |
| 7.B. | Define multi-threading. | 2,CO1,Remember |

- 8.A.** Define the default switch case. 2,CO1,Remember
- 8.B.** What is method overriding? **Or** 2,CO1,Remember
- 9.A.** What is Thread Scheduler? 2,CO1,Remember
- 9.B.** What are the five keywords used in exception handling? **Or** 2,CO1,Remember
- 10.A.** "JAVA is platform independent language" – Justify. 2,CO5,Evaluate
- 10.B.** Justify the advantage of JAVA over procedural programming language. **Or** 2,CO5,Evaluate

Group - B

Answer 8 questions. Each question carries 5 marks. (5 × 8)

- 11.A.** Differentiate between Procedural and Object-Oriented Programming. 5,CO4,Analyze
- Or**
- 11.B.** Differentiate between a class and an Object? What is the use of 'this' keyword? 5,CO4,Analyze
- 12.A.** What might be the difference in functionality between a machine with only JDK installed and another machine with only JRE installed? 5,CO4,Analyze
- Or**
- 12.B.** Differentiate between notify() and notifyAll() methods. 5,CO4,Analyze
- 13.A.** Demonstrate the capacity() & ensureCapacity(). 5,CO3,Apply
- Or**
- 13.B.** Demonstrate memory allocation process in java with respect to methods and variables. 5,CO3,Apply
- 14.A.** Sketch and describe the life cycle of Thread. 5,CO3,Apply
- Or**
- 14.B.** Implement the ways to create multiple threads in java. 5,CO3,Apply
- 15.A.** Develop a java program to check armstrong number by taking input using BufferedReader class. 5,CO6>Create
- 15.B.** Develop a java program to check whether an alphabet is vowel or consonant by taking input from command line. **Or** 5,CO6>Create

- 16.A. Explain how exceptions can be handled with try and catch block. **5,CO2,Understand**
- Or**
- 16.B. Explain Java's Built-in Exception. Write the importance of finally block. **5,CO2,Understand**
- 17.A. Explain each token in the statement: **5,CO2,Understand**
`System.out.println("Hello Java");`
- Or**
- 17.B. Explain the decision-making statements in java. **5,CO2,Understand**
- 18.A. Explain public static void main(String args[]) in Java. **5,CO2,Understand**
- Or**
- 18.B. Explain about Applet Life Cycle. **5,CO2,Understand**

Group - C

Answer 4 questions. Each question carries 10 marks. (10 × 4)

- 19.A. Develop a java code to create Thread by implementing the Runnable interface. Write a java program to implement the yield() method in thread programming. **10,CO6>Create**
- Or**
- 19.B. Develop a java program to use the abstraction property in a multilevel inheritance scenario. **10,CO6>Create**
- 20.A. Develop a java program to create a package and a subpackage then access the methods from both. **10,CO6>Create**
- Or**
- 20.B. What is the concept of dynamic method dispatch in java? Develop a java code to implement dynamic method dispatch. **10,CO6>Create**
- 21.A. Distinguish between the 'throw' and 'throws'. Give proper codes. What happens precisely when the code in the try block throws an exception? **10,CO4,Analyze**
- Or**
- 21.B. Compare OOA, OOD, and OOP. Differentiate between top-down & bottom-up approaches. **10,CO4,Analyze**

22.A. Write a java program to implement the suspend() & resume() method in thread programming.

10,CO3,Apply

22.B. Write a Java Program to Add Two Matrix Using Multi-dimensional Arrays.

Or

10,CO3,Apply
