

CBCS SCHEME

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21CS654

Sixth Semester B.E./B.Tech. Degree Examination, June/July 2026 Programming in Java

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain the OOP principles. (08 Marks)
- b. Explain how arrays are defined in Java with an example. (06 Marks)
- c. Mention the valid and invalid variable names :
 - (i) VTU
 - (ii) 1VTU
 - (iii) -VtU
 - (iv) vTU
 - (v) VTU123
 - (vi) 123_VtU(06 Marks)

OR

- 2 a. Define Type Casting. Explain two types of conversion with example. (06 Marks)
- b. List and explain different integer types. (06 Marks)
- c. Develop a Java program to find the area of circle and perimeter of a circle. (08 Marks)

Module-2

- 3 a. Explain the different types of if statements in Java with an example. (08 Marks)
- b. Explain the Syntax of for each loop and for loop with an example. (06 Marks)
- c. Write a Java program to find the biggest of three numbers. (06 Marks)

OR

- 4 a. With code snippets, explain jump statements in Java. (06 Marks)
- b. Solve the following expressions :
 - i) $(.5 << 2) + 3$
 - ii) $\frac{4}{2} + (1\%2) * 7$(06 Marks)
- c. Explain the following operation with example :
 - (i) $>>$
 - (ii) $>>>$
 - (iii) Ternary operator(08 Marks)

Module-3

- 5 a. What is Constructor? Explain its types with example. (08 Marks)
 b. List and explain the access specifiers in Java and their scope. (06 Marks)
 c. Explain the use of this in Java with an example. (06 Marks)

OR

- 6 a. Explain method overloading and method overriding with the help of Java programs. (06 Marks)
 b. Write a Java program to find the factorial of a number using recursion. (06 Marks)
 c. Explain the following keywords :
 (i) Super
 (ii) Static
 (iii) Final (08 Marks)

Module-4

- 7 a. What are packages in Java? With a simple program create a package and import the package to make use of a class declared in the package. (06 Marks)
 b. Write a simple program to generate arithmetic exception and print the description of the exception through the program. (06 Marks)
 c. Explain multiple catch clauses with an example. (08 Marks)

OR

- 8 a. Explain the role of interface in implementing multiple inheritance in Java. (08 Marks)
 b. Define Exception. Explain how Java Exception handling is managed by the five keywords with the help of Java Program. (12 Marks)

Module-5

- 9 a. Explain different string operations in Java. (12 Marks)
 b. What is enum? Write Java program to demonstrate values () and valueOf () methods. (08 Marks)

OR

- 10 a. Explain Character, Boolean and Integer Type Wrapper. (08 Marks)
 b. Explain the following with Syntax :
 (i) charAt ()
 (ii) toCharArray ()
 (iii) replace ()
 (iv) append () (12 Marks)

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