EPCET LIBRARY BANGALORE-49

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.

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

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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