



Sixth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.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. How object oriented programming is different from process oriented programming? Also explain three principles of object oriented programming. (08 Marks)

b. Explain different integer literals with examples. Also give the output of following code.

```
class con{
public static void main ( String s[ ] )
{
byte b ;
int i = 282 ;
double d = 343.14 ;
b = (byte) i ;
system.out.println ("b value is" +b);
i = (int) d ;
system.out.println ("i value is" +i);
b = (byte) d ;
system.out.println ("b value is" +b);
}
}
```

(08 Marks)

c. Explain "public static void main" in a Java program. (04 Marks)

OR

2 a. Describe any four different Lexical issues used in Java programs with example. (08 Marks)

b. With proper syntax, explain Arrays with single and multi dimension in Java. Also enlist different types of array declaration syntax. (08 Marks)

c. Write a Java program to store the elements 10, 40, 25, 40, 6 in an array, sort the elements in any order and display the elements. (04 Marks)

Module-2

3 a. With example, explain following Bitwise Logical Operators:

- (i) Bitwise NOT
- (ii) Bitwise AND
- (iii) Left shift
- (iv) Right Shift
- (v) Unsigned Right Shift

(10 Marks)

b. Explain "?" operator with example. (04 Marks)

c. Discuss short circuit logical operators and also give the output of following code:

```
class A {
public static void main (String s[ ] )
{
int a = 1 ;
int b = 2 ;
int c = 3 ;
a |= 4 ;
b >>= 1 ;
c <<= 1 ;
a ^= c ;
system.out.println ("a" + a) ;
system.out.println ("b" + b) ;
system.out.println ("c" + c) ;
}
}
```

(06 Marks)

OR

4 a. Write four different syntax of if statement. (08 Marks)

b. Give a syntax of enhanced for loop to trace single and multidimensional arrays. Also list how for each is different from for loop. (08 Marks)

c. Write a program to find midpoint of any two numbers using while loop. (04 Marks)

Module-3

5 a. What is constructor? Explain two types of constructor with example. (08 Marks)

b. Explain with example:
 (i) Static block
 (ii) Static methods
 (iii) this keyword (06 Marks)

c. Write a program to perform stack operation in Java. (06 Marks)

OR

6 a. With example, explain two uses of super. (06 Marks)

b. Differentiate overriding with respect to overloading. Also show an example for dynamic dispatch using method overriding. (08 Marks)

c. What is an Abstract Class? Demonstrate with an example. (06 Marks)

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.

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Module-4

- 7 a. Explain class member access with respect to two different packages and private, public, protected, no modifier variables. (10 Marks)
- b. What is Interface? Give an example to demonstrate working of that. Also show how to extend interfaces in Java. (10 Marks)

OR

- 8 a. What is an exception? With example demonstrate try – catch, throw and throws. (08 Marks)
- b. What are checked and unchecked exceptions? Give two built-in Exception examples for each. (08 Marks)
- c. Write significance of finally in an exception. (04 Marks)

Module-5

- 9 a. Define two types of I/O streams used in Java. Also enlist two abstract classes at the top of hierarchy in both the streams, what are two methods in that. (08 Marks)
- b. Write a Java program using BufferedReader to read characters from the console. (06 Marks)
- c. Discuss Enumeration with example. (06 Marks)

OR

- 10 a. With example discuss any four different types of String Constructors. (08 Marks)
- b. “equals and ==” are different in Java. Justify with example. (04 Marks)
- c. Write the syntax of following string operations : (08 Marks)
- (i) trim()
 (ii) concat()
 (iii) replace
 (iv) charAt
