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CASC-09

BCA (Semester-III)
Examination, July-Dec., 2025

(Session : 2025-26) (NEP-2020)

PROGRAMMING IN JAVA

(DSC)

Time Allowed : Three Hours

Maximum Marks : 70

Note : Attempt all sections as directed. The figures in the right-hand margin indicate marks.

Section-A

(Objective Type Question)

Q.1. Multiple choice questions. Attempt **all** the questions given below: [10x1=10]

(i) JVM stands for

(a) Java Value Machine

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(b) Java Valuable Machine

(c) Java Virtual Machine

(d) Java V-development Machine

(ii) Which keyword is used to define a class in Java?

(a) class

(b) define

(c) struct

(d) object

(iii) Method overloading is a type of

(a) Runtime polymorphism

(b) Compile-time polymorphism

(c) Dynamic binding

(d) Inheritance

(iv) Method overriding occurs in

(a) Same class

(b) Subclass

(c) Interfaces only

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(d) Abstract classes only

(v) Which keyword is used with inheritance?

(a) extends

(b) implements

(c) inherits

(d) derive

(vi) Which of the following is NOT a access modifier

(a) private

(b) protected

(c) interface

(d) public

(vii) Which block is always executed?

(a) try

(b) catch

(c) throw

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(d) finally

(viii) The keyword used to manually throw an exception is

(a) throws

(b) throw

(c) final

(d) catch

(ix) Java I/O byte streams use which class?

(a) InputStream / OutputStream

(b) FileReader

(c) FileWriter

(d) Scanner

(x) AWT stands for

(a) Advanced Window Toolkit

(b) Abstract Window Toolkit

(c) Applet Window Toolkit

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(d) Application Window Toolkit

Q.2. Short answer type questions. Answer all questions: [5x4=20]

(i) What is JDK? How Java source code is compiled and executed?

(ii) Explain constructor function with example. Why it is used?

(ii) Briefly describe method overloading and overriding.

(iv) What is Java package? Give syntax and example for creating new package.

(v) Describe Applet life cycle with diagram.

Section-B

Note: Long/Descriptive answer type questions. Answer **any one** part from each questions given below. [4x10=40]

Q.3. (a) Explain the history and features of Java in detail.

(b) Discuss JVM architecture with a neat diagram.

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OR

(a) Explain all data types in Java with examples.

(b) Write a small Java code to create a class and its object.

Q.4. (a) Define inheritance and its types in Java.

(b) Explain interfaces in Java with syntax and example.

OR

(a) What is an abstract class? Discuss its features, usage, and limitations.

(b) Explain user-defined and built-in packages in Java with example. https://www.pyqonline.com

Q.5. (a) Explain the exception handling mechanism using try, catch, and finally keywords.

(b) Describe the life eycle of a thread with a neat diagram.

OR

(a) Discuss how to create user-defined exception classes in Java.

(b) Explain wait(), notify(), and notifyAll() methods

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with example.

Q.6. (a) Explain Java I/O. Discuss the use of Byte Stream and Character Stream classes.

(b) Explain the life cycle of an Applet with a diagram.

OR

(a) Describe file handling in Java using different File I/O stream classes.

(b) Explain AWT components and containers and AWT class hierarchy.

----- X -----

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