

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc(SS) DEGREE EXAMINATION DECEMBER 2025
(Third Semester)**

Branch - SOFTWARE SYSTEMS(Five years Integrated)

PROGRAMMING IN JAVA

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following is not a valid Java primitive data type? a) int b) double c) string d) boolean	K1	CO1
	2	The keyword this in Java refers to: a) The parent class b) The current object c) A static variable d) A superclass reference	K2	CO1
2	3	Which keyword is used to inherit a class in Java _____ a) implements b) inherits c) extends d) override	K1	CO2
	4	The throws keyword in Java is used to: _____ a) Throw an exception manually b) Declare exceptions a method may throw c) Catch exceptions d) Handle exceptions	K2	CO2
3	5	The default priority of a thread in Java is: _____ a) 1 b) 5 c) 10 d) 0	K1	CO3
	6	Deadlock occurs when _____ a) Threads complete execution b) Threads wait for each other indefinitely c) Threads run sequentially d) Threads are interrupted	K2	CO3
4	7	Which class is the superclass of all byte stream classes? a) Reader b) InputStream c) StreamReader d) Writer	K1	CO4
	8	The lifecycle methods of an applet are _____ a) init(), start(), stop(), destroy() b) begin(), run(), end() c) start(), main(), stop() d) run(), stop(), main()	K2	CO4
5	9	Which version of java use Generics ? a) J2SE 1.4 b) J2SE 5.0 c) Java 6 d) Java 7	K1	CO5
	10	Autoboxing in Java refers to _____ a) Automatic type casting b) Converting primitive to object c) Converting object to primitive d) Overloading constructors	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Interpret the basic data types and control structures used in Java with examples.	K2	CO1
	(OR)			
	11.b.	Infer the scope rules and the use of this keyword in Java with suitable examples.		
2	12.a.	Develop code to illustrate how packages are created and accessed in Java with example.	K3	CO2
	(OR)			
	12.b.	Build code to demonstrate exception handling using multiple catch and finally blocks.		
3	13.a.	Apply the synchronization concept to prevent race conditions in a multithreaded program.	K3	CO3
	(OR)			
	13.b.	Apply the producer-consumer problem using inter-thread communication methods.		
4	14.a.	Compare character streams and byte streams in Java I/O with suitable examples.	K4	CO4
	(OR)			
	14.b.	Analyze the differences between Applets and Swing components in GUI development.		
5	15.a.	Examine the new features of J2SE 5.0 for enhanced for loop and static import.	K4	CO5
	(OR)			
	15.b.	Analyze the Collections Framework hierarchy with emphasis on List and Set interfaces.		

SECTION - C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine the importance of inheritance and method overloading in achieving reusability and flexibility in Java.	K4	CO1
2	17	Analyze the role of interfaces and packages in promoting modularity and abstraction in Java applications.	K4	CO2
3	18	Inspect the Java thread model and synchronization mechanisms with appropriate code examples.	K4	CO3
4	19	Examine the role of streams in Java I/O and compare predefined streams with file streams.	K4	CO4
5	20	Test for the impact of new features in J2SE 5.0 like generics, autoboxing, and varargs on Java programming practices.	K4	CO5