

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)

Branch - COMPUTER SCIENCE WITH DATA ANALYTICS

OBJECT ORIENTED PROGRAMMING USING 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 Java keyword? (a) class (b) this (c) goto (d) define	K1	CO1
	2	Automatic type promotion in Java occurs when (a) Only integers are used in expressions (b) Operands of smaller data types are used in an expression, causing implicit widening (c) Keywords are used in the program (d) Classes are used in inheritance	K2	CO1
2	3	Which keyword is used to prevent method overriding? (a) abstract (b) static (c) final (d) private	K1	CO2
	4	When dividing by zero in Java, an ArithmeticException is thrown because (a) Division by zero is a checked exception (b) The JVM cannot represent the result of division by zero for integers (c) Null values cause the error (d) The compiler enforces this at compile time	K2	CO2
3	5	Which method is used to pause a thread for a specified time? (a) wait() (b) stop() (c) sleep() (d) join()	K1	CO3
	6	Which statement best explains how to extract a character from a string in Java? (a) charAt() method retrieves a character at a specific index, while substring() retrieves part of the string (b) getChar() method extracts characters one by one (c) indexOf() method returns the character directly (d) substring() method retrieves a single character only	K2	CO3
4	7	Which keyword is used to create a package in Java? (a) package (b) import (c) namespace (d) module	K1	CO4
	8	In the applet lifecycle, which statement is true? (a) init() is called once for initialization, followed by start() for execution (b) start() initializes the applet and replaces init() (c) paint() is always executed before init() (d) stop() runs before init()	K2	CO4
5	9	In the Delegation Event Model, who generates the event? (a) Listener (b) Source (c) Adapter (d) Object	K1	CO5
	10	Why is JFrame considered a top-level container in Swing? (a) Because it cannot contain any components (b) Because it can contain other containers and components, unlike JPanel or JLabel (c) Because it inherits from JButton (d) Because it is an abstract class	K2	CO5

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SECTION - B (35 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks $(5 \times 7 = 35)$

Module No.	Question No.	Question	K Level	CO
1	11.a.	Analyze the structure of a simple Java program and illustrate it with an example.	K4	CO1
		(OR)		
	11.b.	Develop a program to demonstrate the use of constructors in a class and analyze it.		
2	12.a.	Examine the concept of method overriding with a suitable example.	K4	CO2
		(OR)		
	12.b.	Analyze built-in exceptions with examples to evaluate their role in robust programming.		
3	13.a.	Evaluate the effect of thread priorities with a program that demonstrates their impact on execution.	K5	CO3
		(OR)		
	13.b.	Write a program to compare strings using equals() and compareTo() and evaluate the outcomes.		
4	14.a.	Assess the concept of interfaces by writing a program to implement and test an interface.	K5	CO4
		(OR)		
	14.b.	Evaluate the use of the '<APPLET>' tag in HTML with a program that accepts and displays parameters passed from the tag.		
5	15.a.	Design and justify the use of event listener interfaces with suitable examples.	K6	CO5
		(OR)		
	15.b.	Create and test a Swing program that implements a menu bar with menu items, demonstrating advanced GUI design.		

SECTION - C (30 Marks)
Answer ANY THREE questions
ALL questions carry EQUAL Marks $(3 \times 10 = 30)$

Module No.	Question No.	Question	K Level	CO
1	16	Analyze the concepts of classes and objects with a program that demonstrates class fundamentals and method definitions.	K4	CO1
2	17	Examine exception handling using multiple catch clauses with an example and analyze how control flows during different exceptions.	K4	CO2
3	18	Evaluate the concept of multithreading with a program that creates two threads, one printing even numbers and the other printing odd numbers and assess how thread execution is managed.	K5	CO3
4	19	Assess the importance of packages with a program to create and import a user-defined package and evaluate its role in modular programming.	K5	CO4
5	20	Design and implement a Swing program to create a registration form with text fields, radio buttons and a submit button.	K6	CO5