Reg.No.: | | | | | | | | | | | | |

VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 50054

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. / FEB. 2026
Second / Third Semester
Computer Science and Engineering
U23CS204 – OBJECT ORIENTED PROGRAMMING
(Common to IT, CST and AI & DS)
(Regulation 2023)

Time: Three Hours | Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	List the advantage of OOPs over Procedure-oriented programming language.	2	K1	CO1
2.	Write a simple program to demonstrate class and object.	2	K2	CO1
3.	How are variables declared and initialized in Java?	2	K2	CO2
4.	Name the types of inheritance supported in Java.	2	K1	CO2
5.	Define abstract class with an example.	2	K2	CO3
6.	What happened when the statement: int value=20/0; is executed?	2	K2	CO3
7.	State the two ways to create a thread in Java.	2	K1	CO4
8.	Differentiate between byte stream and character stream.	2	K2	CO4
9.	Mention any two methods of the String class for string manipulation.	2	K1	CO5
10.	Deduce the structure of AWT event hierarchy.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.		Questions	Marks	KL	CO
11.	a)	Elaborate on the various object oriented concepts, with necessary illustrations.	13	K2	CO1

(OR)

	b)	What is meant by constructor? Discuss the types of constructor with necessary example programs for each.	13	K2	CO1
12.	a)	Explain the concept of classes and objects in Java. How objects are declared and object reference variables assigned? Give necessary examples to illustrate.	13	K2	CO2
		(OR)			
	b)	Describe the fundamental concepts of inheritance in Java. How is the super keyword used to support inheritance? Illustrate your explanation with suitable examples.	13	K3	CO2
13.	a)	What are packages in Java? Explain how packages are created and used. Discuss the different access modifiers and how they control access within and across packages. Provide examples demonstrating package creation and access protection.	13	K3	CO3
		(OR)			
	b)	Summarize the following with example program i. Arithmetic Exception ii. Index Out Of Bound Exception	7 6	K3	CO3
14.	a)	Explain the life cycle of threads in java. Also explain each stage with relevant method needed with example programs.	13	K2	CO4
		(OR)			
	b)	Describe the basics of the Java I/O system. Explain the role of input and output streams. Differentiate between byte streams and character streams. Provide a suitable program that reads and writes data using both types of streams.	13	K2	CO4
15.	a)	Explain the event handling mechanism in Java. Discuss the event delegation model, including the roles of event sources, event listeners, and event objects. Provide an example program to demonstrate the handling of a button click event.	13	K2	CO5
		(OR)			
	b)	List and explain at least five important AWT controls (components). Explain how to add these controls to a frame and handle events generated by them. Provide a complete program demonstrating a simple AWT window with a Button, Label, TextField, and Checkbox.	13	K2	CO5

PART – C

(1 x 15 = 15Marks)

Q.No.			Questions	Marks	KL	CO
16.	a)	i.	Explain in detail about various operators in java.	7	K3	CO5
		ii.	Develop and create a simple calculator with basic operation such as a. Addition b. Subtraction c. Multiplication d. Division	8		
			(OR)			
	b)		Write a program to perform the following functions using classes, objects, constructors and destructors where essential.		K3	CO2
		i.	Get as input the marks of 5 students in 5 subjects.	3		
		ii.	Calculate the total and average and Print the formatted result on the screen.	12		