CBCS SCHEME

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BPLCK205C

Second Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
Basics of Java Programming

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Write a Java Program to find greatest of 3 numbers.	6	L2	CO1
	b.	With reason identify the following declarations are valid or invalid : #AvgTemp, Count, a4, $test, 2Count, high-temp, _Sum , if	6	L2	CO1
	c.	Explain type casting and type conversion in Java with an example program.	8	L2	CO1
		OR			
Q.2	a.	Write a Java Program to swap data in 2 variables without using temporary variable.	4	L2	CO1
	b.	Define Array. With Syntax and Example Program. Explain declaration of single dimensional array in Java.	6	L2	CO1
	c.	Briefly explain the basic principle of Java.	10	L2	CO1
		Module – 2			
Q.3	a.	Briefly explain the following operators in Java with an example program : >> << ~	6	L2	CO2
	b.	With example program, explain following statements : (i) Break (ii) Continue	8	L2	CO2
	c.	Write a Java Program to find largest of 2 numbers using ternary operator.	6	L3	CO2
		OR			
Q.4	a.	Write a Java Program that prints all real solutions to the quadratic equation, $ax^2 + bx + c = 0$. Read in a, b, c and use the quadratic formula.	10	L3	CO1
	b.	With syntax and example program, explain iterative statements in Java.	10	L2	CO1
		Module – 3			
Q.5	a.	Explain following keywords in Java with examples : (i) this (ii) final (iii) Static	10	L3	CO3
	b.	Define Constructor. Explain types of constructors with example programs.	10	L3	CO3

		OR			
Q.6	**a.**	Explain Garbage collection in Java with an example.	**6**	**L2**	**CO3**
	b.	Write a Java program to find factorial of a number using recursion.	**6**	**L3**	**CO3**
	c.	Define method overloading. Explain with an example program.	**8**	**L3**	**CO3**
		Module – 4			
Q.7	**a.**	Why multiple inheritance is not supported in Java. Justify with an example.	**8**	**L3**	**CO3**
	b.	Explain the "Super" keyword in Java.	**4**	**L2**	**CO3**
	c.	Define method overriding. Explain with an example program.	**8**	**L2**	**CO3**
		OR			
Q.8	**a.**	Explain types of inheritance in Java with example.	**10**	**L2**	**CO3**
	b.	Design a Super Class called staff with details as staffId, Name, Phone, Salary. Extend this class by writing three subclasses namely Teaching (domain, publications), Technical (Skills) and Contract (Period). Write a Java Program to read and display at least 3 staff objects of all three categories.	**10**	**L3**	**CO3**
		Module – 5			
Q.9	**a.**	With a neat block diagram, explain types of Java Exceptions.	**10**	**L2**	**CO4**
	b.	Define interface. Differentiate between Class and interface.	**5**	**L2**	**CO4**
	c.	Write a note on packages in Java.	**5**	**L2**	**CO4**
		OR			
Q.10	**a.**	Explain following types of Exceptions : (i) ArithmeticException (ii) ArrayIndexOutOf BoundsException (iii) SQLExceptions (iv) NullPointerExceptions	**12**	**L3**	**CO4**
	b.	Illustrate "throw" and "throws" in Java Exceptions with example.	**8**	**L3**	**CO4**

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