Enrolment No. /Seat No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER I- EXAMINATION –WINTER-2025

Subject Code: MC01094041   **Date: 20/01/2026**
Subject Name: Object Oriented Programming using JAVA
Time:10:30 AM TO 01:00 PM   **Total Marks: 70**
Instructions:

    1. **Attempt all questions.**
    2. **Make Suitable assumptions wherever necessary.**
    3. **Figures to the right indicate full marks.**
    4. **Use of simple calculators and non-programmable scientific calculators are permitted.**

Q.1	**(a)**	**Define Following terms(any seven)**	**07**
		(1) Object	
		(2) Byte code	
		(3) Literals	
		(4) Garbage Collection	
		(5) 'New' keyword	
		(6) Nested class	
		(7) Finalize() method	
		(8) If statement	
	(b)	Explain the difference between the variable of primitive data types and reference data type with java code.	**07**
Q.2	**(a)**	What is constructor? Explain Constructor Overloading and Method Overloading with Example.	**07**
	(b)	**Differentiate between following(any two)**	**07**
		1. While loop and do-While loop	
		2. 'this' keyword and 'super' keyword	
		3. Autoboxing and unboxing	
		OR	
	(b)	**Differentiate between following(any two)**	**07**
		1. String and StringBuffer	
		2. Throwable and Runnable	
		3. Implements and extends	
Q.3	**(a)**	Explain Polymorphism, Inheritance and Encapsulation with example.	**07**
	(b)	What is Package? Explain "java.lang" package.	**07**
		OR	
Q.3	**(a)**	What is method overriding? Explain with example.	**07**
	(b)	What is interface? Give four differences: abstract class and interface.	**07**
Q.4	**(a)**	What is an Exception? How many different types of exception available in Java?	**07**
	(b)	What is difference between Vector and ArrayList? How the Enumeration interface is useful in Java explain with code?	**07**
		OR	
Q.4	**(a)**	If we are declaring variable, method, class as final. What will happen?	**07**
	(b)	What is Wrapper class? Explain Integer class with example.	**07**
Q.5	**(a)**	What is Thread?Write example to create multiple thread in Java.	**07**
	(b)	**Explain Following terms with example.**	**07**
		1) Thread Priority 2) BufferedInputStream	
		OR	
Q.5	**(a)**	What is Stream? Explain Character Stream classes with example.	**07**
	(b)	**Explain Following terms with example.**	**07**
		1) Synchronization 2) Byte Stream	

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