

Enrolment No. /Seat No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA – SEMESTER I- EXAMINATION –WINTER-2025

Subject Code: 619402

Date: 16/01/2026

Subject Name: Object Oriented Programming in 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) Discuss Bytecode, JVM and JDK. **03**
(b) Describe short hand assignment using example. **04**
(c) Explain Constructor inheritance and Super keyword. **07**
- Q.2** (a) Explain keywords: try, catch, finally, throw, and throws. **07**
(b) Define package. Describe steps to create package and access package with example. Also explain the importance of static import in java. **07**
- OR**
- (b) Discuss passing and returning object as parameters with example. **07**
- Q.3** (a) Explain command line arguments. Write a program to explain the same. **07**
(b) Write a program to demonstrate method overloading and constructor overloading. **07**
- OR**
- Q.3** (a) Explain String and StringBuffer. Write a program to explain both. **07**
(b) Explain abstract class and interface. **07**
- Q.4** (a) Discuss Polymorphism with reference to superclass reference assigned a subclass object. Discuss related uncertainties. **07**
(b) Discuss Dynamic method Dispatch with suitable example. **07**
- OR**
- Q.4** (a) Explain wrapper class with example. Explain autoboxing and unboxing with example. **07**
(b) Describe methods of Collection Interface. **07**
- Q.5** (a) Explain Generics in java with suitable program. **07**
(b) Discuss static modifier and related concepts. **07**
- OR**
- Q.5** (a) Define Thread. Explain different ways of thread creation in Java? Discuss the Thread life cycle with suitable example of java program code. **07**
(b) Can Java extend more than one class? Why? Discuss your thoughts. **07**
