

Enrolment No. /Seat No.: \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

MCA – SEMESTER I- EXAMINATION –SUMMER-2025

**Subject Code: 619402**

**Date: 30/05/2025**

**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)** Do as directed. **07**
- i) We can't extend \_\_\_\_\_ class in java.
  - ii) \_\_\_\_\_ class is the cosmic super class of all classes in java.
  - iii) We can't create objects of concrete class in java.(True/False)
  - iv) We can't use multiple inheritance in java.(True/False)
  - v) Write the correct syntax to write 7 as octal constant in java.
  - vi) Define Garbage collection.
  - vii) What is the size of char data type in java?
- (b)** List and explain buzzwords of java. **07**
- Q.2 (a)** Explain use of static, final, this and super keywords in java. **07**
- (b)** What are constructors? Explain overloading of constructors with a suitable example. **07**
- OR**
- (b)** i) Give difference between following **04**
- a) String and StringBuffer
  - b) == and equals() (String class)
- ii) What is an array? How can we use array in java? Explain for each loop to use with array. **03**
- Q.3 (a)** What is an interface? How it overcomes the problem of multiple inheritances in java? Explain with example. **07**
- (b)** What is package? How can we create and import packages in java? Explain with suitable example. **07**
- OR**
- Q.3 (a)** What are abstract classes in java? How it can be useful? Explain with example. **07**
- (b)** Explain boxing, unboxing and auto-boxing in java. **07**
- Q.4 (a)** What is an exception? How can we handle exceptions in java? Explain with a suitable example. **07**
- (b)** Explain collection framework in java. Discuss any two interfaces of collection framework. **07**
- OR**
- Q.4 (a)** What is a thread? What are the different ways of creating threads in java? Explain anyone with a suitable example. **07**
- (b)** What are custom exceptions? How it is useful? Explain with example. **07**
- Q.5 (a)** Write a program to copy contents of one file to another. Name of both the files must be passed from command line. Implement necessary exception handling. **07**
- (b)** What is thread synchronization? Explain with a suitable example. **07**
- OR**
- Q.5 (a)** Explain generics in java. How can we define a generic class in java? Explain with code snippet. **07**
- (b)** What are InputStream, OutputStream, Reader and Writer class in java. Explain any one with its methods. **07**

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