

Seat No./Enrollment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BCA/MCA INTEGRATED – SEMESTER 3 – EXAMINATION – SUMMER 2026

Subject Code: BC03001021

Date: 15/05/2026

Subject Name: OBJECT ORIENTED PROGRAMMING WITH JAVA

Time: 02:30 PM TO 05:00 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) Answer the following. **07**
1. Which class in Java is the parent of all classes?
 2. Java programs are compiled into _____ which are executed by the JVM.
 3. _____ Keyword is used to refer to the current object in Java.
 4. The keyword used to inherit a class is _____.
 5. _____ Keyword is used to call the parent class constructor.
 6. The base class of all exceptions in Java is _____.
 7. The method used to start a thread is _____.
- (b) Answer the following. **07**
1. Give full Form of JDK.
 2. Define term JRE.
 3. What is array?
 4. What is final keyword?
 5. What is thread?
 6. Define term static keyword.
 7. What is package?
- Q.2** (a) Explain features of java. **07**
- (b) 1. Explain JVM in detail. **07**
2. Explain Program structure of java.
- OR
- (b) Explain type conversion and type casting with example. **07**
- Q.3** (a) Explain operator in java in detail. **07**
- (b) Explain method overloading with example. **07**
- OR
- Q.3** (a) What is class? Explain how to create object of class and access rule of that. **07**
- (b) What is constructor? Explain types of constructor with example (any one). **07**
- Q.4** (a) What is inheritance? Explain multilevel inheritance with example. **07**

(b) Explain method overriding with example. 07

OR

Q.4 (a) What is interface? Explain extends keyword in interface. 07

(b) What is abstract class? Explain with example. 07

Q.5 (a) Explain exception with example. 07

(b) Explain thread life cycle. 07

OR

Q.5 (a) Explain priority of thread and synchronized keyword 07

(b) What is stream class? Explain its hierarchy. 07

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
BCA/MCA INTEGRATED - SEMESTER - III EXAMINATION - WINTER 2025

Subject Code: BC03001021

Date: 01-12-2025

Subject Name: Object Oriented Programming with 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.**

	Marks
Q.1 (a) I. What is a class in Java? II. What are subclasses and superclasses? III. What is the advantage of Java over C++? IV. What is the use of separators in java program? V. What is the use of 'static'? VI. What is type casting? VII. What is polymorphism?	07
(b) Compare procedure-oriented and object-oriented programming.	07
Q.2 (a) What are the features of Java?	07
(b) Discuss jump statements and their usage.	07
OR	
(b) What is constructor? Explain types of constructor.	07
Q.3 (a) Explain inheritance with its type and give suitable example.	07
(b) Explain Method Overloading and Method Overriding with an example.	07
OR	
(a) Explain how Java achieves encapsulation.	07
(b) Write a program to demonstrate copy constructor.	07
Q.4 (a) Explain the difference between compile-time and runtime polymorphism.	07
(b) Describe how to create a user-defined exception.	07
OR	
(a) Discuss access control modifiers.	07
(b) Describe packages and how to create and use them.	07
Q.5 (a) Explain thread lifecycle with a neat diagram.	07
(b) Discuss thread synchronization and inter-thread communication.	07

OR

- (a)** What is Exception in Java? Explain exception handling in Java with suitable example. **07**
- (b)** Explain file handling using Java I/O classes. **07**
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