

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER- V EXAMINATION-SUMMER 2023****Subject Code: 2150704****Date: 27/06/2023****Subject Name: Object Oriented Programming using 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. Simple and non-programmable scientific calculators are allowed.

- Q.1** (a) List out three Object Oriented Programming principle **03**
(b) Differentiate Abstract and Interface **04**
(c) List out different data types available in java. **07**
- Q.2** (a) Discuss different usage of term : Final **03**
(b) Discuss functionality of “Super” keyword with code snippet. **04**
(c) List out different operators available in java. Discuss their functionality. **07**
- OR
- (c) Explain different loops available in Java with code snippet. **07**
- Q.3** (a) Mention usage of Constructor. **03**
(b) Discuss term : JVM , JRE **04**
(c) Write a java program to check whether given string is palindrome or not. **07**
- OR
- Q.3** (a) What is dynamic method dispatch? **03**
(b) How to implement Thread using interface and inheritance in java. **04**
(c) Write a java program to check whether given number is prime or not. **07**
- Q.4** (a) Discuss functionality of Object class in java. **03**
(b) Define term : Exception. List out any four different types of java in built exception class. **04**
(c) Write a java program to demonstrate method overloading and overriding. **07**
- OR
- Q.4** (a) Discuss vector class in java with code snippet. **03**
(b) Describe term: throw and throws with respect to exception in java. **04**
(c) Write a java program to read employee id, empname, department name, joining date, salary of an employee from console then write that employee details in file then read that details and print on console. **07**
- Q.5** (a) Discuss term : Multiplicity. **03**
(b) List out different class relationship in class diagram. **04**
(c) Draw state diagram for washing machine. **07**
- OR
- Q.5** (a) How to draw an activity diagram. **03**
(b) Draw use case view for ATM system. **04**
(c) Draw Class diagram for online shopping system. **07**
