

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV(NEW) EXAMINATION – WINTER 2022****Subject Code:3140705****Date:20-12-2022****Subject Name:Object Oriented Programming -I****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. Simple and non-programmable scientific calculators are allowed.

	MARKS
Q.1 (a) Discuss significance of byte code.	03
(b) Explain Java garbage collection mechanism.	04
(c) List OOP characteristics and describe inheritance with examples.	07
Q.2 (a) Explain constructor with the help of an example.	03
(b) List out different methods available for String class in java and explain any two with proper example.	04
(c) Explain all access modifiers and their visibility as class members.	07
OR	
(c) Compare String with StringBuffer. Also, write a program to count the occurrence of a character in a string.	07
Q.3 (a) What is the final class? Why they are used?	03
(b) Write exception handling mechanisms in JAVA.	04
(c) Explain Overloading and Overriding with example.	07
OR	
Q.3 (a) How can you create packages in Java?	03
(b) What is Inheritance? List out the different forms of Inheritance and explain any one with example.	04
(c) Explain the words super, static, final and this with the help of an example.	07
Q.4 (a) List out various layout panes in JavaFX.	03
(b) Explain the architecture of JavaFX.	04
(c) Discuss BufferedInputStream and BufferedOutputStream classes with an example.	07
OR	
Q.4 (a) List out JavaFX UI controls and explain any one in detail.	03
(b) Demonstrate animation effect in JavaFX.	04
(c) Create a class called Student. Write a student manager program to manipulate the student information from files by using FileInputStream and FileOutputStream.	07
Q.5 (a) What is Java Collection?	03
(b) List out methods of Iterator and explain it.	04
(c) Explain Set and Map in Java with example.	07
OR	
Q.5 (a) What is Vector class?	03
(b) Describe with diagram the life cycle of Thread.	04
(c) Explain synchronization in Thread with suitable example.	07
