

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-IV (NEW) EXAMINATION – WINTER 2024

Subject Code:3140705

Date:30-11-2024

Subject Name:Object Oriented Programming -I

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.

		Marks
Q.1	(a) Why public, static, void and arguments in following statement required → public static void main(String args[])	03
	(b) List out different types of loops available in java with code snippet.	04
	(c) Describe Inheritance, Polymorphism and Data Encapsulation characteristics of OOP with example.	07
Q.2	(a) State three use of final keyword.	03
	(b) Describe java Access modifier.	04
	(c) Define concept of method overloading and method overriding with examples.	07
	OR	
	(c) What is Abstract class? Describe usage of Abstract class with one example.	07
Q.3	(a) Describe use of Super keyword.	03
	(b) Describe various methods and usage of Object class in java.	04
	(c) Create a class called Employee that includes three pieces of information as instance variables—a first name (typeString), a last name (typeString) and a monthly salary (double). Your class should have a constructor that initializes the three instance variables. Provide a set and a get method for each instance variable. If the monthly salary is not positive, set it to 0.0. Write a test application named EmployeeTest that demonstrates class Employee's capabilities. Create two Employee objects and display each object's yearly salary. Then give each Employee a 10% raise and display each Employee's yearly salary again.	07
	OR	
Q.3	(a) Describe use of static keyword.	03
	(b) Define property of Dynamic method dispatch with example.	04
	(c) Create a class named Account with instance variables Ac_No,Name and Balance and methods display (), setdata (),deposit(). In display () method, display the instance variables value Ac_No,Name and Balance). And in setdata () method set the instance variable values (Ac_No,Name and Balance) and in deposit() method the amount that user wants to deposit that will be deposited.	07
Q.4	(a) Write a Java program to copy one array list into another.	03
	(b) Read two numbers from command line argument and print sum of them.	04
	(c) Describe steps to create a package with one example.	07

OR

- Q.4** (a) Describe following keywords: (i) throw (ii) throws **03**
(b) Compare Abstract class and Interface **04**
(c) Create a method named Withdraw () in the main function performing exception handling. Example: Balance = 1000; Withdraw = 12000 Here, Balance<Withdraw (throw exception) **07**

- Q.5** (a) Describe following term : finally and finalize **03**
(b) Write a java program to read employee details from emp.txt file and print on screen. **04**
(c) Create customer class which extends thread class and contains two instance variables name, ProductName and static variable Product Quantity. For example if two customers are trying to buy the same product at once then follow synchronization of two customers extending thread class. **07**

OR

- Q.5** (a) Describe any one wrapper class with its method usage. **03**
(b) Write a java program to read students details from console and write that students details into emp.txt file. **04**
(c) Write a program to create GUI for Student registration form using JavaFX. **07**
