

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2021****Subject Code:3140705****Date:05/01/2022****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) What are syntax errors (compile errors), runtime errors, and logic errors?	03
(b) What is Type Casting? Explain widening and narrowing type casting.	04
(c) Explain Data Types in detail with example.	07
Q.2 (a) What is an interface? Explain with example.	03
(b) Explain “Passing argument by values” with example.	04
(c) Explain File class with its methods.	07
OR	
(c) What is polymorphism? Explain dynamic binding with example.	07
Q.3 (a) Explain abstract class with example.	03
(b) Explain Method Overloading and Overriding.	04
(c) Write a program that counts the number of words in a text file. The file name is passed as a command line argument. The words in the file are separated by white space characters.	07
OR	
Q.3 (a) Differentiate String class and StringBuffer class.	03
(b) Explain following keywords (1) super (2) this	04
(c) Write a program that illustrates interface inheritance. Interface P is extended by P1 and P2. Interface P12 inherits from both P1 and P2. Each interface declares one constant and one method. class Q implements P12. Instantiate Q and invoke each of its methods. Each method displays one of the constants.	07
Q.4 (a) Explain visibility modifiers.	03
(b) Explain following controls (1) Checkbox (2) Radio Button (3) Textfield (4) Label	04
(c) What is an Exception? Explain try, catch and finally with example.	07
OR	
Q.4 (a) What is the keyword “throw” used for? What is the keyword “throws” used for?	03
(b) What is constructor? Explain constructor overloading.	04
(c) Explain different layout panes used in JavaFX.	07
Q.5 (a) Differentiate Text I/O and Binary I/O	03
(b) Explain Inner class with example.	04
(c) What is thread? Describe the complete life cycle of thread.	07

OR

- Q.5** (a) Compare List and Set. **03**
(b) Explain static variable and static method with example. **04**
(c) Explain Thread Synchronization with example. **07**

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