

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MCA - SEMESTER-III • EXAMINATION – SUMMER 2017**

**Subject Code: 630002**

**Date: 09-06-2017**

**Subject Name: Fundamentals of Java Programming**

**Time: 02:30 pm - 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.

- Q.1** (a) 1. Explain the narrowing, widening and mixed conversion for numeric types in java. **03**  
2. Differentiate between Comparable and Comparator interfaces. **04**  
(b) 1. Discuss the use of Matcher class. **03**  
2. Differentiate between daemon and non-daemon threads. **04**
- Q.2** (a) What is Layout? List out different layouts and explain BorderLayout with example. **07**  
(b) 1. Define the various states of thread life cycle. **03**  
2. Discuss inner class with example. **04**
- OR**
- (b) 1. What is Random access File? Discuss any two important methods of it. **03**  
2. Differentiate between checked and unchecked exception. **04**
- Q.3** (a) 1. What are the Wrapper classes? Explain boxing and unboxing conversions. **03**  
2. Explain the use of finalize method with example. **04**  
(b) What is exception handling? Discuss the uses of "throw", "throws", "try", "catch" and "finally" keywords. **07**
- OR**
- Q.3** (a) Explain the use of adapter classes with proper example. **07**  
(b) What is collection framework? Discuss Map interface with example. **07**
- Q.4** (a) Explain the uses of static variables and methods with example. **07**  
(b) Differentiate String and StringBuffer class. Explain the trim(), substring() and contains() methods of String class. **07**
- OR**
- Q.4** (a) Discuss about initializer blocks and class initializer blocks. **07**  
(b) Define package. State the steps to create and import a package using suitable example. **07**
- Q.5** (a) Define Thread. Explain the need of thread synchronization with proper real life example. **07**  
(b) Create a Frame which contains some buttons, showing the names of various Colors. Use event handling to set background color of the Frame depending on the button selected. **07**
- OR**
- Q.5** (a) Write a program that compare the contents of two files and display appropriate message such as files are equal or not equal. Pass the file names using command line argument. **07**  
(b) What is Applet? Discuss various life cycle methods of an Applet. **07**

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