

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2017****Subject Code: 2150704****Date: 03/11/2017****Subject Name: Object Oriented Programming using JAVA****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.
- Q.1**
- (a) Discuss public, private and protected access modifiers. **03**
 - (b) What is constructor? Explain constructor overloading with example. **04**
 - (c) Discuss Following with example: **07**
 - (i) Super Keyword
 - (ii) Final Keyword
- Q.2**
- (a) Explain usage of class FileInputStream and FileOutputStream by giving an example. **03**
 - (b) Draw and Explain Thread Life Cycle. **04**
 - (c) Explain Dynamic method dispatch with proper example. **07**
- OR**
- (c) Create a class called Student. Write a student manager program to manipulate the student information from files by using the BufferedReader and BufferedWriter. **07**
- Q.3**
- (a) List features of Java. Briefly explain any two. **03**
 - (b) (i) Create a two dimensional array. Instantiate and Initialize it. **04**
(ii) Differentiate String class and StringBuffer class.
 - (c) Explain the words 'static' and 'this' with the help of example. **07**
- OR**
- Q.3**
- (a) List and Explain Methods for Inter-thread communication (cooperation). **03**
 - (b) Explain package and its use with appropriate example. **04**
 - (c) Write a program for chat application using TCP. **07**
- Q.4**
- (a) Discuss exception and error. **03**
 - (b) Differentiate between Method overloading and Method overriding. **04**
 - (c) Define the following terms: **07**
Aggregation, Abstract Class, Generalization, Rectification, Constraints, Package, Metadata.
- OR**
- Q.4**
- (a) Write a note on 'Collection in JAVA'. Also discuss List and Enumeration Interface. **03**
 - (b) Discuss link and association in UML with diagram. **04**
 - (c) Explain the importance of exception handling in java. Which key words are used to handle exceptions? Write a program to explain the use of these keywords. **07**
- Q.5**
- (a) Write a program to find whether the given string is palindrome or not. **03**
 - (b) Draw sequence diagram for book issue process of library. **04**
 - (c) Explain activity diagram with the help of an example. **07**

OR

- Q.5**
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| (a) | Explain interface and its usage. | 03 |
| (b) | Draw use case diagram for Library Management System. | 04 |
| (c) | Explain Nested States. Draw the Nested states diagram for the phone line. | 07 |
