**M S Ramaiah Institute of Technology**

**Department of Information Science and Engineering**

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| **Term:** | 23/01/2017 to 13/05/2017 | **Course Code:** | IS624 |
| **Course:** | Java and J2EE | **Semester:** | 6 |
| **CIE:** | Test-I | **Max Marks:** | 30 |
| **Date:** | 28/2/2017 | **Time:** | 9:30 am -10:30am |

**Portions for Test:** Lecture Nos. from 1 to 16 as per lesson plan **Instructions to Candidates:** Answer any **Two** out of Three questions. **Mobile phones are banned**

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| **Sl No** | **Questions** | **Marks** | **Blooms Level** | **CO** |
| 1a. | Create an employee class with members name, age, qualification, and year of experience and Salary. Write a java program to create a LinkedList of Employee class. If the year of experience of an employee is greater than 5 then display the details. | (5) | A | 2 |
| 1b. | With examples, explain the role of **final** in java. | (4) | U | 1 |
| 1c. | Define a package p1 which includes an base abstract class Finance with details such as income, expenses, investment, number\_insurances and numb\_family. In package p2, define derived classes, SalariedClass(Salary, position) and BusinessClass( type\_of\_business, numb\_employees). Use constructors, super and appropriate display methods. | (6) | C | 1 |
| 2a. | List the advantages of the Collection Interface. With simple illustrations explain how ArrayList can be created. | (5) | U | 2 |
| 2b. | Create a FourWheeler class holding color, manufacture\_year, has\_air\_bags has\_adjustable\_controls and cost. Write a derived class CarClass that includes persons\_capacity, number\_of\_doors and servicing charges. Raise user defined exceptions InappropriateNumber if the number\_of\_doors is less than 4 and ServiceException if the service charges exceed 25,000/-. | (10) | C | 1 |
| 3a. | Write a java program that creates an ArrayList of Integers. Obtain the largest element in this ArrayList by using toArray() method. | (5) | A | 2 |
| 3b. | Describe the use enumerations in switch case with an example. | (4) | U | 1 |
| 3c. | Write a java program to read a file “file1.txt”, place every alternate character of file1.txt in “file2.txt” , copy last half of the file1.txt to third file “file3.txt”. | (6) | A | 1 |