

Time: 2.5 hours

Total Marks: 75

Q1. Answer the Following: (Any 4) (20 marks)

- Explain different ways in which 'super' keyword can be used in Java.
- Differentiate between an interface and a class.
- Create a class Complex with the following members:
 - two fields of type double to store the real and imaginary part of the complex number.
 - constructor(s) to initialize the complex number.
 - method that adds two complex numbers and returns the result
- What do you mean by final variables, final methods and final class? Explain it.
- 'Subclassing an interface' Explain it with suitable program.
- List and explain access specifiers in java.
- Explain the following string library functions: toCharArray(), getBytes(), getChars(), charAt(), lastIndexOf().

Q2. Answer the Following: (Any 4) (20 marks)

- Write a program to copy the contents of a file data1.txt to a file data2.
- What is the purpose of Socket class? Explain any two constructors and two methods of this class.
- Explain any two byte-stream classes that can be used for reading content from a file.
- What do you understand by multithreading? Explain how to create thread using Thread class.
- Discuss any five methods of java.netserverSocket class.
- Write a client socket that will accept n names from user and send

Q3. Answer the Following: (Any 4) (20 marks)

- Write a note on List interface of Collections Framework.
- Explain Border Layout Manager in AWT.
- What is the purpose of CheckboxGroup class in Java? How to use it in AWT programming?
- Explain Set interface and any one of its implementation class.
- Write a GUL application that accepts Principle amount, No. Of years & Rate of interest from 3 text fields, when you click "Calculate Interest" button simple interest should be calculated. When you click on "Final Amount" button, the final amount by adding principle amount and interest should be displayed.
- What is radio button? Discuss its usage in java.

Q4. Answer the Following: (Any 3) (15 marks)

- What is an array? How is one-dimensional array declared, created and initialized in java
- Write a note on Thread class.
- What do you mean by Member Inner class? Exception it with suitable example.
- Write a note on Event-Delegation model.

- e. What are the major difference between an interface and a class?
- f. Describe abstract class called Shape which has three subclass any triangle. Rectangle, circle. Define one method area() in the abstract class and override. It in its three subclasses to calculate area for specific object.