- 1) a) Write a java program to print prime numbers up to n.
  - b) Write a java program to create different shapes and fill colors using applet.
- 2) a) Write a java program for accepting a number from a keyboard and to display the sum of digits of a given number.
  - b) Write a java program to initialize the object through
    - (a) by reference variable
    - (b) by method
    - (c) by constructor
- 3) a) Write a java program to print the factorial of given number using while loop.
  - b) Write a java program to search for an element in a given list of elements using binary search mechanism.
- 4) a) Write a java program to sort for an element in a given list of elements using merge sort.
  - b) Write a java program using String Buffer to perform append, insert, delete and reverse operations.
- 5) a) Write a java program to sort the elements of an array in ascending order.
  - b) Write a java program for abstract class to find areas of different shapes.
- 6) a) Write a java program to implement class mechanism. Create a class, methods and invoke them inside main method.
  - b) Write a java program that identifies key-up, key-down event user entering text in a applet.
- 7) a) Write a java program to implement constructor overloading.
  - b) Write a java program that creates threads by extending Thread class. First thread display "Good morning" every 1 sec, second thread display "Hello" every 2 secs and the third thread display "Welcome" every 3 secs.
- 8) a) Write a java program to implement method overloading.
  - b) Write a java program to create User defined package and that import and used in the defined your package.
- 9) a) Write a java program to implement multilevel inheritance.
  - b) Write a case study on thread synchronization with a sample program, Justify the JAVA language-level support for synchronizing threads.
- 10) a) Write a java program to demonstrate the usages of instance variables, static and local variables in the "Demo" class.
  - b) Write a java program that implements Runtime polymorphism.
- 11) a) Write a java program by using "this" keyword and "super" keyword.
  - b) Write a java program illustrating isAlive() and join()

- 12) a) Write a java program to implement interfaces. What kind of inheritance can be achieved?
  - b) Write a java program that describes exception handling mechanism.

13) a) Write a java program for creation of java built-in exceptions.

- b) Write a java program illustrating Daemon Threads.
- 14) a) Write a java program for creation of user defined exceptions.
  - b) Write a java program to print 4 entered numbers in ascending order.