



should turn green. When HELP is pressed shown on the status bar-“HELP is pressed” and the text field should turn yellow.

**Q-5**

**Attempt all questions**

- (a) Explain use of keyword final by giving suitable examples. (03)
- (b) Differentiate the followings: (04)
- (i) Checked and Unchecked Exceptions
  - (ii) Constructor and method
- (c) Explain thread synchronization in Java with join() and isAlive() methods. (07)

**Q-6**

**Attempt all questions**

- (a) Explain Thread Life Cycle in detail. Write a code to create Thread in JAVA. (07)
- (b) Explain dynamic method dispatch with suitable example. (07)

**Q-7**

**Attempt all questions**

- (a) Explain in detail use of adapter class, inner class and anonymous inner class with suitable example. (07)
- (b) Explain method overriding in Java. Describe an abstract class called Shape which has three subclasses say Triangle, Rectangle and Circle. Define one method area() in the abstract class and override this area() in these three subclasses to calculate for specific object i.e. area() of Triangle subclass should calculate area of triangle etc. Same for Rectangle and Circle (07)

**Q-8**

**Attempt all questions**

- (a) List and explain different types of layout. Write a program that implements Border Layout, Flow Layout and Grid Layout using panel. (07)
- (b) Write a complete program to accept N integer numbers as command line arguments. Raise and handle exceptions for following cases : (07)
- when a number is -ve.
  - when a number is evenly divisible by 10
  - when a number is greater than 1000 and less than 2000
  - when a number is greater than 7000
- Skip the number if an exception is raised for it, otherwise add it to find total sum.

