LIB
3/11/15 FN

Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 21760

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Fifth Semester

Information Technology

IT 2301/IT 51/10144 IT 501 — JAVA PROGRAMMING

(Regulations 2008/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Demonstrate Java overloaded constructor.
2. State the difference between static and non static class members.
3. Give the meaning for the keywords: final, finally, finalize.
4. Provide code on how to perform multilevel package for Java programs.
5. What is Java Reflection?
6. Provide the life-cycle of an applet.
7. Differentiate Swing and AWT.
8. Explain any four swing components with proper syntax.
9. What are interrupting threads? Give example.
10. What is the need for Generic code?

PART B — (5 × 16 = 80 marks)

11. (a) Write Java code having class-objects-constructors-methods that reads five integers and determines the largest and the smallest in the group and displays them. (16)

Or

(b) Explain the various inheritance options available in Java with sample code. (16)

12. (a) (i) Explain Polymorphism as an alternate to switch logic. (8)

(ii) Write Java code to demonstrate Polymorphism. (8)

Or

(b) (i) Distinguish between non-abstract and abstract methods. (8)

(ii) Write Java code to demonstrate abstract method. (8)

13. (a) (i) Write program that uses method draw line to draw a square. (8)

(ii) Explain character Stream class in detail. (8)

Or

(b) (i) Write Java code that randomly draws characters in different font sizes and colors. (8)

(ii) Explain how object cloning is performed in Java? Mention its usage. (8)

14. (a) (i) Write a Java Program to illustrate AWT event hierarchy. (8)

(ii) Write short note on Java Multithreading. (8)

Or

(b) (i) Explain virtual machine concept in Java. (8)

(ii) Write a Java code to show thread synchronization. (8)

15. (a) Write an application that plays "guess the number" as follows: Your application chooses the number to be guessed by selecting an integer at random in the range 1–1000. The application then displays the following in a label :

I have a number between 1 and 1000. Can you guess my number?

Please enter your first guess.

A JTextField should be used to input the guess. As each guess is input, the background color should change to either red or blue. Red indicates that the user is getting "warmer," and blue indicates that the user is getting "cold-er." A JLabel should display either "Too High" or "Too Low" to help the user zero in on the correct answer. When the user gets the correct answer, "Correct!" should be displayed, and the JTextField used for input should be changed to be uneditable. A JButton should be provided to allow the user to play the game again. When the JButton is clicked, a new random number should be generated and the input JTextField changed to be editable. (16)

Or

(b) With GUI and exception handling using Java create a calculator application. (16)