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53 (IT 501) JVPR

2017

## JAVA PROGRAMMING

Paper : IT 501

Full Marks : 100

Time : Three hours

**The figures in the margin indicate full marks for the questions.**

Answer **any five** questions.

1. (a) What is Multitasking ? Is multithreading a form of multitasking ? 5
- (b) What is the advantage of having anonymous classes while handling events in Java ? Explain with example. 8
- (c) What are the various dialog boxes available in swing and how are they created ? 7
2. (a) What is the difference between JButton and JToggleButton ? 4

Contd.

- (b) What are inner frames? What classes are used to create them? 6
- (c) Write a Java program to demonstrate the execution of a high-priority thread and how it delays the execution of all lower priority threads. 10
3. (a) What is the difference between update ( ) and repaint ( ) method? 4
- (b) What do you mean by different parameters of APPLET tag? 6
- (c) If you create two threads in your program, how many threads actually run? Explain the complete flow of execution of threads inside a program. 10
4. (a) What is the significance of Applet class in creating an applet? Also explain the hierarchy of Applet class. 5
- (b) How is the concept of inner class used for event handling? Explain with example. 5
- (c) Write a program that uses thread synchronization to guarantee data integrity in a Multithreaded application. 10

5. (a) Write a Java program that demonstrates each of the following methods: 10
- (i) indexOf ( )
  - (ii) charAt ( )
  - (iii) replace ( )
  - (iv) substring ( )
  - (v) equals ( )
- (b) What are exceptions? How are they handled in Java? 5
- (c) What are packages? How are they created and used? 5
6. Write a Java program that implements a simple client/server application. The client sends data to a server. The server receives the data, uses it to produce a result, and then the result back to the client. The client displays the result on the console. 20
7. Write a Java program that determines whether a phrase entered by the user is a palindrome. A palindrome is a phrase that reads the same backward and forward without regarding capitalization or punctuation. For example, "Dot saw I was Tod" is a palindrome. 20

5. Write a Java program that demonstrates each of the following methods:

- (a) `indexOf()` (in `char[]`)
- (b) `replace()` (in `String`)
- (c) `equalsIgnoreCase()`

(d) What are exceptions? How are they handled in Java?

(e) What are packages? How are they created and used?

Write a Java program that implements a simple client-server application. The client sends data to a server. The server receives the data, uses it to produce a result, and then the result back to the client. The client displays the result on the console.

Write a Java program that determines whether a phrase entered by the user is a palindrome. A palindrome is a phrase that reads the same backward and forward without regarding capitalization or punctuation. For example, "Dot saw I was too in a palindromic."