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53 (IT 501) JVPR

2019

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 are the ways to draw a polygon on the screen ? Explain with example. 10
- (b) Describe the arguments used in the method drawRoundRect (). 10
2. (a) Write a Java program that reads a number and checks whether it is a two-digit number or not. 10

Contd.

(b) Write a Java program to read five integers from command line and calculate the mean and median of the numbers. 10

3. (a) What is the use of keyword static in case of a variable and in case of a method? 5

(b) What is a class? How does it accomplish data hiding? What is the need of a constructor? $2+3+5=10$

(c) Explain the terms autoboxing and unboxing. 5

4. (a) Write a Java program to sort an array of strings in alphabetical order. 10

(b) What do you understand by implementing interfaces? Explain with an example. 5

(c) Discuss the role of inheritance in object-oriented programming. 5

5. (a) Write a program to demonstrate IndexOutOfBoundsException, NullPointerException and StringIndexOutOfBoundsException. 10

(b) What is a file? Why do we require files to store data? Describe the most commonly used classes for handling I/O related exception with files. 10

6. Write a socket-based Java server program that responds to client messages as follows: when it receives a message from a client, it simply converts the message into all uppercase letters and sends back the same to the client. Writing both client and server programs demonstrating this. 20

7. Write a Java code to design a GUI-based frame to collect two integers and an operator from text fields. Create four buttons representing +, -, * and / operations. Display the result in another text field. 20
