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# 521454(21)

## MCA (Fourth Semester) Examination, April-May 2017

### (New Course)

### (Computer Applications Branch)

### ADVANCED JAVA PROGRAMMING

*Time Allowed : Three hours*

*Maximum Marks : 100*

*Minimum Passing Marks : 40*

*Note :* *Answer any two parts from each question. All questions carry equal marks. While reading class names for Java ignore case.*

## Unit - I

1. (a) Explain the differences between String and String Buffer class in Java. Write a Java source code to read a name from the user as command line

parameter and display the reverse of that name.

A sample execution case is given as :

javac ReverseString.java James

The Reversed name is - semaJ

(b) List the differences between an Abstract class and an Interface. What are the uses of the following interfaces? http://www.csvtuonline.com

(i) java.lang.Runnable

(ii) java.io.Serializable

(c) What is the importance of static methods in Java? When should be a method of a class declared as static? What is the difference between a static method of a class and a static block of a class.

## Unit - II

2. (a) Explain the working of java.util.HashMap and java.util.HashSet classes in java. List some other important classes in the Java collection framworks.

(b) With the help of example source codes explain the different techniques to create a user defined thread in Java. List the important methods of java.lang.Thread class.

(c) Write a well documented Java source code to illustrate the use of try, throw, catch and finally statements in Java. Mention the output for some sample executions of the code.

## Unit - III

3. (a) Write a well documented Java source code to copy the contents of one text file into another using suitable input and output stream classes.

(b) Explain the use of the java.net.InetAddress and java.net.URLConnection classes in Java. List the important methods from these classes.

(c) Explain the concept of Remote Method Invocation.

## Unit - IV

4. (a) Write a well documented java source code using Swing components that displays a button contained in a frame. Provide event handling functionality to the button so that it displays the message "Hello World" on a JOptionPane message dialog on the click event.

(b) What are the benefits of Swing components over AWT components?

(c) What are Layout Managers? Using block diagrams explain the different types of Layouts Managers available in Java.

## Unit - V

5. (a) Write a documented Java source code to demonstrate the technique of passing parameter to an Applet using the <param>tag of HTML.

(b) Draw and explain the life cycle of an Applet. Explain the working of the method getDocumentBase( ) and getCodeBase( ) methods of java.applet.Applet class.

(c) Explain the architecture of Servlets. What is the use of cookies?