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**R. V. COLLEGE OF ENGINEERING**

**Autonomous Institution affiliated to VTU  
V Semester B. E. Fast Track Examinations July-19**

**Computer Science and Engineering  
JAVA AND JEE (ELECTIVE)**

**Time: 03 Hours****Maximum Marks: 100****Instructions to candidates:**

1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
2. Answer FIVE full questions from Part B.

**PART-A**

1	1.1	<p>What is the output of the program?</p> <pre> class Base {     public void show()     {         System.out.print("Base:: show( ) called");     } } class derived extends Base {     public void show()     {         System.out.print("Derived:: show( ) called");     } } class main {     public static void main(string [ ] args)     {         Base b = new derived();         b.show();     } } </pre>	02
	1.2	Write the Java code to display the current date and time.	02
	1.3	What is difference between <i>ClassNotFoundException</i> and <i>NoClassDefFoundError</i> .	02
	1.4	Write the Java method to create and start the thread using Runnable interface.	02
	1.5	Mention four types of <i>JDBC</i> Drivers.	02
	1.6	Write the Java method to add the elements at any specific index using <i>ArrayList</i> collection framework.	02
	1.7	Mention any two differences between <i>TYPE_FORWARD_ONLY</i> and <i>TYPE_SCROLL_INSENSITIVE</i> .	02
	1.8	Write the syntax how to declare the multi-dimensional array in Java Native Interface.	02
	1.9	Mention the four packages of servlet available in Java.	02
	1.10	Name the tags of the directive elements available as per <i>JSP</i> specifications.	02

**PART-B**

2	a	Explain packages and multiple inheritances in Java with sample code snippets.	08
	b	Write a Java program to convert binary number to octal number without using <i>Parse Int</i> .	08
<b>OR</b>			
3	a	Explain the various levels of access protection with code snippets.	08
	b	Write a Java program to compare two arrays and print the array in a sorted manner.	08
4	a	With help of code snippets, explain exception handling mechanism.	08
	b	Describe the complete life cycle of a thread. With a sample code, explain thread priority.	08
<b>OR</b>			
5	a	Write a Java program to print a stack of exception.	08
	b	Write a Java program to implement Queue using threads.	08
6	a	With help of code snippets, explain the following collection framework: i) Vector ii) Stack iii) Enumeration iv) Set.	08
	b	Describe the steps of <i>JDBC</i> process with suitable exception handling blocks.	08
<b>OR</b>			
7	a	Write a Java program to get the lowest and highest value stored in a tree using <i>TreeSet</i> collection framework.	08
	b	With help of code snippets, explain how to set scroll option to <i>ResultSet</i> .	08
8	a	With a neat diagram, explain <i>MVC</i> architecture.	08
	b	Create a simple web application with two <i>JSP</i> page: First <i>JSP</i> page- provides an <i>HTML</i> form with two inputfields to enter phone number and <i>PIN</i> code. Second <i>JSP</i> page-shows the phone number and <i>PIN</i> code that entered by user through the input field.	08
<b>OR</b>			
9	a	Explain the different stages of servlet file cycle.	08
	b	Explain the implicit objects in <i>JSP</i> .	08
10	a	Write down the steps involved in mapping argument types in the native method declarations to native programming language.	08
	b	With code snippets, discuss the difference between native class and native methods.	08
<b>OR</b>			
11	a	Write a Java program using native methods to display string " <i>RVCE</i> ".	08
	b	Discuss the steps to integrate native code with the Java program.	08