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Code No. :16108 AS N (C)

**VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD**

**B.E. (CBCS) VI-Semester Advanced Supplementary Examinations, July-2019**

**Introduction to Java Programming**

(Open Elective-VII)

Time: 3 hours

Max. Marks: 70

*Note: Answer ALL questions in Part-A and any FIVE from Part-B*

**Part-A (10 × 2=20 Marks)**

1. List the data types supported in Java.
2. The subclass object can be referred by its superclass reference but not vice versa? Give reason.
3. How does the usage of equals() and == differ during String comparison.
4. What is nested class? Give an example.
5. Demonstrate Date class with a suitable example.
6. What is need for two different types of streams- Byte stream and character stream?
7. What will be the output of the following code?

Explain.

```
import java.io.File;
```

```
public class FilesListFromFolder {  
    public static void main(String a[]){  
        File file = new File("C:/MyFolder");  
        File[] files = file.listFiles();  
        for(File f: files){  
            System.out.println(f.getName());  
        }  
    }  
}
```

8. Write a program to illustrate the Lifecycle of an Applet.
9. What is the significance of Bytecode?
10. Distinguish between an Applet and a Frame.

**Part-B (5 ×10=50 Marks)**

11. a) List and explain the buzzwords/ features of Java. [4]  
b) Create a class **Employee** with **calc\_salary()** as one of the methods with appropriate members. Write a program to create two types of employee, **permanent\_emp** and **hourly\_emp**, and override **calc\_salary()** function in both. [6]
12. a) How are exceptions handled in Java? Explain with suitable example. [5]  
b) Write a program to create two threads, one which calculates the factorial of the given no and the other thread to check whether the no is divisible by 4. [5]
13. a) Explain the use of the Random class with an example. [5]  
b) Differentiate between Byte streams and character streams. Write a program to read the contents of one file and display it on the monitor. [5]
14. a) What is delegation event Model? Explain the different event listeners available in java along with the corresponding methods. [5]

- b) Create an Applet, with the UI as shown below. Implement Event handling on each of these buttons, **Add** to find the sum of the given two no's in the textfields and the **Clear** to reset the values to 0. When you click on the **Exit** button the program has to stop execution. The result value has to be displayed in the last Textfield. [5]

The image shows a Java Applet window titled "Number Addition". Inside the window, there are three text input fields. The first is labeled "First Number:", the second is labeled "Second Number:", and the third is labeled "Result:". Below the "First Number:" and "Second Number:" fields, there are two buttons: "Add" and "Clear". Below the "Result:" field, there is a button labeled "Exit".

15. a) Write a program to read the cgpa of 10 students, sort them and display the second least cgpa. [5]  
 b) Describe the various access specifiers present in Java and their usage across packages. [5]
16. a) Write a program to read a string of multiple names and tokenize them and then sort the array of names in alphabetical order. [5]  
 b) List the different Layout Managers available in java. Explain Border layout in detail. [5]
17. Answer any *two* of the following:  
 a) Distinguish final and finalize. Explain the restrictions imposed by java final Keyword with appropriate examples. [5]  
 b) Which class is used to get the information of a file in java? Explain any 4 methods in that class. [5]  
 c) Write a program to create a frame and place components on it. [5]

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