INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)

B.Tech III Semester End Examinations (Supplementary) - January, 2018

Regulation: IARE – R16

OBJECT ORIENTED PROGRAMMING THROUGH JAVA
(Computer Science and Engineering))

Time: 3 Hours   **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Explain data abstraction with a real time example.   **[7M]**

   (b) Write a Java program to check whether two strings are equal or not without using built-in functions.   **[7M]**

2. (a) Write a Java program for Fibonacci series and tower of hanoi using recursion.   **[7M]**

   (b) Explain features of Java in brief.   **[7M]**

UNIT – II

3. (a) Explain inheritance and its types? How runtime polymorphism can be achieved using inheritance, explain with a suitable program?   **[7M]**

   (b) Explain abstract class with an example and compare with interface.   **[7M]**

4. (a) Why we have to set PATH and CLASSPATH environment variables in Java? Explain the steps for setting them.   **[7M]**

   (b) Discuss any Java default package hierarchy and explain the various access privileges that we have to follow while working with Java packages.   **[7M]**

UNIT – III

5. (a) Write a program to illustrate sub class exception precedence over base class.   **[7M]**

   (b) Write a program to illustrate creation of threads using runnable class.(start method start each of the newly created thread. Inside the run method there is sleep() for suspend the thread for 500 milliseconds).   **[7M]**

6. (a) Write a program to create a class named shape. In this class we have three sub classes circle, triangle and square each class has two member function named draw () and erase(). Create these using polymorphism concepts.   **[7M]**

   (b) Write a program for example of try and catch block. In this check whether the given array size is negative or not.   **[7M]**

UNIT – IV

7. (a) While taking the file content into consideration, what are the various file streams? Write the code segments for opening a file in both the streams. **[7M]**

   (b) Write a Java program that reads a file and counts number of alphabets, numerals, words, special characters and lines. **[7M]**

8. (a) Write a program that counts the number of lines, words and characters in the given filename through command line argument. **[7M]**

   (b) Write a Java program to create a STUD table(USN, STNAME, M1, M2, M3,M4,M5) enter the data through program for the above table query: **[7M]**

   Compute student grade and display all the details.

   (grade ="fail" If one of the subject marks less than 40)

   (grade ="pass" If average marks between 40 to 50)

   (grade ="second class" If average marks between 50 to 60)

   (grade ="first class" If average marks between 65 to 85)

   (grade ="distincion" If marks > 85)

UNIT – V

9. (a) What are the advantages of swing over AWT **[7M]**

   (b) Using grid layout class, write a program to display the following. **[7M]**
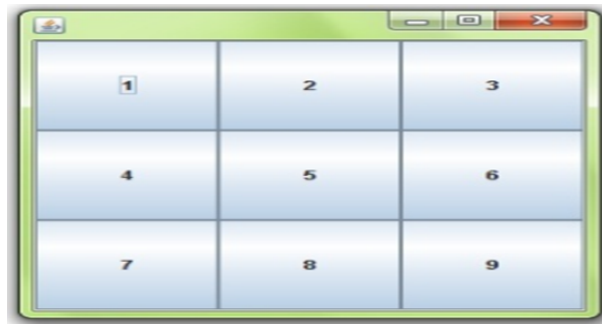

Figure 1

10. (a) Write a swing application which uses JTabbed Pane and JPanel. **[7M]**

    (b) With an example, demonstrate passing of parameters to applet. **[7M]**

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