



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)  
(Dundigal-500043, Hyderabad)

B.Tech III SEMESTER END EXAMINATIONS (SUPPLEMENTARY) - FEBRUARY 2022

Regulation: R16

## OBJECT ORIENTED PROGRAMMING THROUGH JAVA

Time: 3 Hours

(CSE)

Max Marks: 70

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Answer FIVE Questions choosing ONE question from each module  
(NOTE: Provision is given to answer TWO questions from any ONE module)

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

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### MODULE – I

1. (a) Explain data abstraction with a real time example. [7M]  
(b) Write a program check two strings are equal or not without using built-in Functions. [7M]
2. (a) Write a program to give the example for 'this' operator. And also use the 'this' keyword as return statement. [7M]  
(b) Write a program to demonstrate static variables, methods, and blocks. [7M]

### MODULE – II

3. (a) Write a program to give example for multilevel inheritance in Java. [7M]  
(b) Explain polymorphism in java at runtime. [7M]
4. (a) Answer the following with Yes or no and give appropriate reasons:
  - i) Can we create non static variables in an interface?
  - ii) Can we declare interface members as private or protected?
  - iii) Can we declare a constructor inside an interface?
  - iv) Can abstract class be final in Java?
  - v) Can abstract class contains main method in Java ? [7M]  
(b) Give all the usage of super keyword and an example of one of the usage. [7M]

### MODULE – 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) Describe the methods involved in inter thread communication. [7M]  
(b) Explain re-throwing an exception with a simple example. [7M]

### MODULE – IV

7. (a) What is a JDBC driver? Explain the JDBC statements with an example. [7M]

- (b) Write a program that counts the number of lines, words and characters in the given filename through command line argument. [7M].
8. (a) Explain the purpose of streams. List out the various methods of reader and writer abstract classes. [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:  
 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) [7M]

### MODULE – V

9. (a) Explain in detail Swing and AWT. What are the advantages of Swing over AWT. [7M]
- (b) Using Grid layout class, Write a program to display the following.

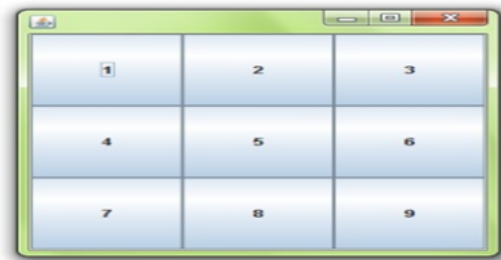


Figure 1

[7M]

10. (a) Write a Swing application which uses JFrame and JPanel [7M]
- (b) With an example, demonstrate passing of parameters to applet. [7M]

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