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**Question Paper Code : X 10313**

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2020/  
APRIL/MAY 2021

Third/Fourth/Fifth Semester

Computer Science and Engineering

CS 8392 – OBJECT ORIENTED PROGRAMMING

(Common to : Computer and Communication Engineering/Electrical and  
Electronics Engineering/Electronics and Communication Engineering/Electronics  
and Instrumentation Engineering/Electronics and Telecommunication  
Engineering/Instrumentation and Control Engineering/Information Technology)  
(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. Define encapsulation in Java.
2. What is a constructor ?
3. Exemplify the use of super keyword.
4. What are the differences between classes and interfaces ?
5. What is the purpose of finally clause ? Give example.
6. What are the uses of streams. What are the two types of streams ?
7. What is the need for synchronization ? How it can be implemented ?
8. How to create a single class, which automatically works with different types of data ? Give example.
9. Write the sequence in which method calls takes place when an applet is terminated ? Define those methods.
10. What are the two key features of Swing ?

PART – B

(5×13=65 Marks)

11. a) i) How Java changed the internet ? (9)  
ii) If semicolons are needed at the end of each statement, why does the comment line not end with a semicolon ? (4)
- (OR)
- b) What are the three categories of control statements used in Java ? Explain each category with example. (13)



12. a) Write a Java program to calculate electricity bill using inheritance. The program should get the inputs of watts per hour and unit rate.

Check your program for the following case :

Assume a consumer consumes 5000 watts per hour daily for one month. Calculate the total energy bill of that consumer if per unit rate is 7 [1 unit = 1k Wh]. **(13)**

(OR)

- b) What is interface ? With an example explain how to define and implement interface. **(13)**

13. a) Write a short note on the following topics :

- Uncaught exceptions. **(3)**
- Difference between throw and throws. Give example for both. **(5)**
- Chained exceptions. Give example. **(5)**

(OR)

- b) How to perform reading and writing files ? Explain with example. **(13)**

14. a) Discuss the different states of thread in detail. **(13)**

(OR)

- b) i) What is the purpose of thread priorities ? What are the different thread priorities that exist ? **(5)**

- ii) What are bounded types ? Why it is used ? Give example. **(8)**

15. a) i) List any five different user interface components that can generate the events. **(5)**

- ii) Demonstrate any four mouse event handlers with example. **(8)**

(OR)

- b) Describe how to work with graphics to display information within window. **(13)**



PART – C

(1×15=15 Marks)

16. a) Write an AWT GUI application (called AWT Counter) as shown in the Figure 1. Each time the “Count” button is clicked, the counter value shall increase by 1.

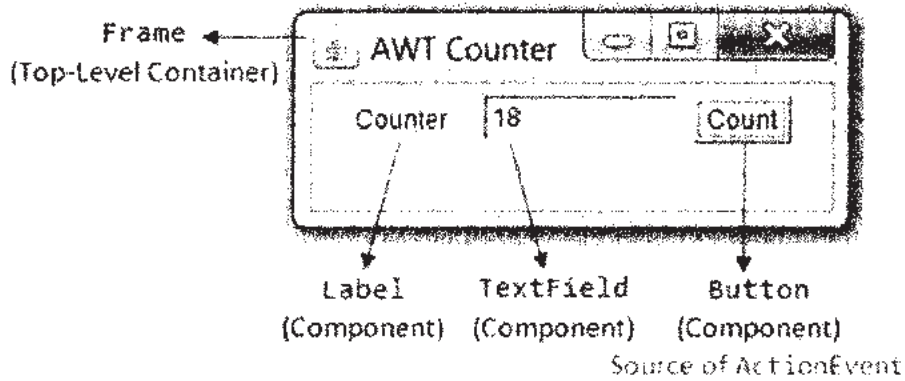


Figure 1

(OR)

- b) Write an addressbook class that manages a collection of person object. An addressbook will allow a person to add, delete, or search for a person object in the address book.
- Add method : It should add a person object to the addressbook.
  - Delete method: It should remove the specified person object from the book.
  - Search method: It searches the address book for a specified person and returns the list of persons matching the specified criteria. The search can be done either by first name, last name or person id.
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