

KATHMANDU UNIVERSITY  
End Semester Examination [C]  
November/December, 2023

Marks Scored:

Level : B.E.

Year : III

Course : GEOM 319

Semester : II

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date

04 DEC 2023

**SECTION "A"**

[20Q. × 0.5 = 10 marks]

**Encircle the most appropriate alternative from each set of choices.**

1. According to Java White Paper, which of the following is **FALSE**?  
a. Simple                      b. Objected-based                      c. Distributed                      d. Secure
2. Platform differences dealt with by \_\_\_\_\_ in Java.  
a. Java Runtime Environment                      b. Java Development Kit  
c. Java Virtual Environment                      d. Java Virtual Machine
3. Which of the following conversion might lose precision?  
a. byte to short                      b. char to short                      c. int to float                      d. int to double
4. Which of the following can be overloaded in Java?  
a. "%" operator overloading                      b. "\*" operator overloading  
c. "/" operator overloading                      d. Method overloading
5. Which of the following is a **FALSE** statement?  
a. When declaring an array variable, we cannot specify size.  
b. Objects are dynamically allocated.  
c. *delete* operator is used to destroy an object.  
d. Array declaration, allocation, and initialization can be done in one statement.
6. Which of the following is **NOT** a Java keyword?  
a. Public                      b. default                      c. protected                      d. private
7. If a programmer does not provide constructors, Java provides a default constructor that sets object variables to default value of \_\_\_\_\_.  
a. 0                      b. 0.0                      c. false                      d. null
8. A method can access \_\_\_\_\_.  
a. private fields of all objects of its class  
b. private fields of the object from which the method is called  
c. private fields of all objects of its superclass  
d. "default" fields of all objects of its superclass

9. If subclass constructor does not call a superclass constructor explicitly, \_\_\_\_\_.
- Parameterized constructor of the super class is called
  - Parameterized constructor of the subclass is called
  - Default constructor of the subclass is called
  - Default constructor of the superclass is implicitly called
10. Which of the following can/is not be inherited?
- Abstract class
  - Object class
  - Final class
  - Class with a final method
11. Which of the following statement is FALSE?
- A method can throw multiple types of exceptions.
  - If no exceptions are thrown by codes in the try block, the catch block is skipped.
  - Overriding method in subclass can throw more exceptions than corresponding method in superclass.
  - A try block can have multiple catch blocks for multiple types of exceptions. Their order of placement is important.
12. Applets are controlled by browser through \_\_\_\_\_ methods.
- 1
  - 2
  - 3
  - 4
13. When a button is clicked, an \_\_\_\_\_ object is generated.
- ActionEvent
  - MouseEvent
  - FocusEvent
  - ClickEvent
14. Which of the following is not a method of java.awt.Component for managing focus?
- requestFocus()
  - isFocusable()
  - transferFocus()
  - isTransferable()
15. e.getKeyCode() returns \_\_\_\_\_ when it is used within keyTyped().
- 1
  - 0
  - virtual key code
  - key character
16. \_\_\_\_\_ the base class for all Swing components (except JFrame).
- Container
  - JComponent
  - JPanel
  - Window
17. getDefaultToolkit () is \_\_\_\_\_.
- a static method for creating an object
  - a non-static method for creating an object
  - a constructor of java.awt.Toolkit class
  - a constructor of javax.swing.Toolkit class
18. Which of the following is TRUE about interface?
- Class CLASSNAME implement INTERFACENAME
  - Class CLASSNAME implements INTERFACENAME1, INTERFACENAME1
  - One can instantiate interfaces.
  - Interfaces can have static methods.

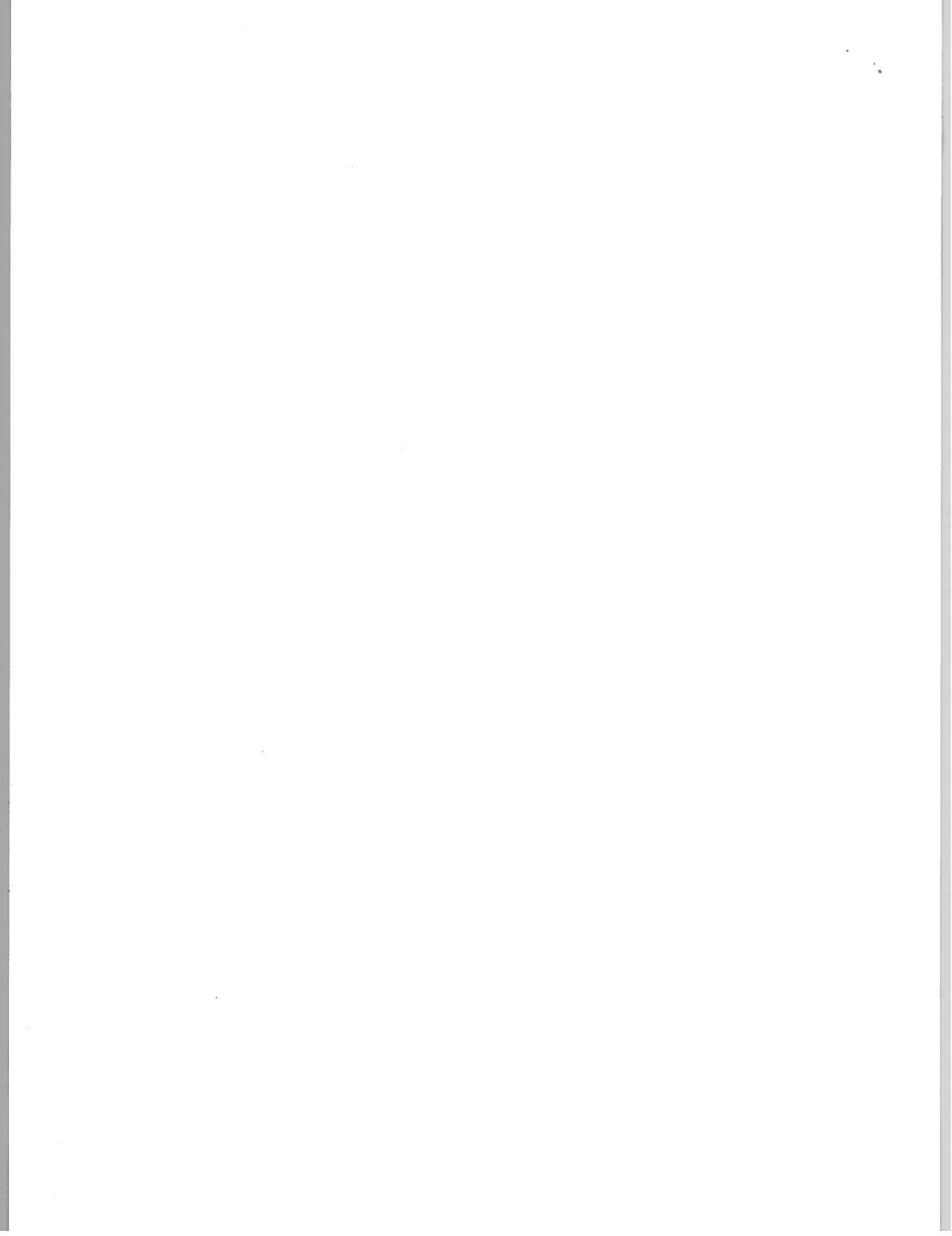
04 DEC 2023

19. What does `setAutoCommit(false)` do?
- a. commits transaction after each query
  - b. explicitly commits transaction
  - c. does not commit transaction automatically after each query
  - d. never commits transaction

20. What will be the following program?

```
public class JavaProgram {  
    public static void main(String[] args) {  
        short i = 10;  
        i = i * 5;  
        System.out.print(i);  
    }  
}
```

- a. 50
- b. 10
- c. Compiler error
- d. Throughs exception



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SECTION "B"  
[6Q. × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. Describe the statement "Write once, run anywhere" with a necessary diagram.
2. Explain getting user input of different types in Java with relevant code extracts. Describe any one accessor method of String. [3 + 1]
3. Why are factory methods useful in Java? Explain the resolution of function overloading with relevant examples. [2 + 2]
4. Are static fields inherited and duplicated in subclass? Illustrate with Java code extracts.
5. Illustrate multiple exception handling with a Java program.
6. What features of an application are not handled by a Java applet? Explain applet life-cycle. [1 + 3]
7. Write a program to read contents of a PostgreSQL table and display them to the user console.
8. Demonstrate the use of static inner class with an example Java program.

SECTION "C"  
[2Q × 8 = 16 marks]

Attempt *ALL* questions. Assume suitable data when necessary.

9. What is paintComponent()? Write a java program to display different shapes with diverse colors. Your program should also display important geometrical parameter at relevant locations alongside the shapes. [2 + 6]
10. Illustrate tagging interface with Java code extracts. Write a Java program to demonstrate key events. [2 + 6]

