

Tribhuvan University  
**Institute of Science and Technology**  
2076  
☆

Bachelor Level / Fourth Year /Seven Semester/Science  
**Computer Science and Information Technology-(CSc.403)**  
**(Advanced Java Programming)**

Full Marks: 60  
Pass Marks: 24  
Time: 3 hours.

*Candidates are required to give their answers in their own words as for as practicable.*  
The figures in the margin indicate full marks.

**Group A**

**Attempt any two questions.**

(2x10=20)

1. What is exception handling? Discuss the use of each keyword (try, catch, throw, throws and finally) with suitable Java program.
2. Write a Java program to find sum of two numbers using swing components. Use text fields for input and output. Your program displays output if you press any key in keyboard. Use key adapter to handle events.
3. Define servlet. Discuss life cycle of servels. Differentiate servlet with JSP. Write a simple JSP file to display 'IOST 20 times.

**Group B**

**Attempt any eight questions.**

(8x5=40)

4. Define class. How do you create a class in Java? Differentiate class with interface.
5. Write a simple Java program that reads a file named "Test,.txt" and displays its contents.
6. Why do we need layout management? What is GridBag layout?
7. Discuss MVC design pattern with example.
8. What are the benefits of using JDBC? What is prepared statement?
9. Write Java programs using TCP Sockets that communicate with each other in a computer network.
10. Define JabaBean. How is it different from other Java programs? What is design pattern?
11. How do you handle HTTP request (GET) using servlet?
12. What are different layers of RMI architecture? Explain.
13. Write short notes on:  
a) Servlet API  
b) RMI vs CORBA

[2.5+2.5]