

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

**2073**

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

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

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

**Section A**

**Attempt any Two questions. (2x10=20)**

1. What is multithreading? How can you write multithreaded programs in java? Discuss with suitable example.
2. What is Java Beans? How is it different from other Java classes? Discuss property design patterns with suitable example of each.
3. What is socket? How can you write java programs that communicate with each other using TCP sockets? Discuss with suitable example.

**Section B**

**Attempt any Eight questions. (8x5=40)**

4. Write an object oriented program to find the area and perimeter of rectangle. [5]
5. Write the simple java program that reads data from one file and writes data to another file. [5]
6. Discuss border layout with example. [5]
7. Why is it important to handle events? List any five event classes. [2.5+2.5]
8. What is JDBC? How do you execute SQL statements in JDBC? [2+3]
9. Discuss the process of sending email messages using Java. [5]
10. What is JSP? Discuss with suitable example. [2+3]
11. What is InetAddress class? Discuss. [5]
12. What is RMI? Discuss architecture of RMI. [1+4]
13. Write short note on: [2.5+2.5]  
a. Interface b. Servlet

