Tribhuvan University
Institute of Science and Technology
2079

Bachelor Level / Fourth Year Seventh Semester / Science — Full Marks: 60
Computer Science and Information Technology (CSC409) — Pass Marks: 24
(Advanced Java Programming) — Time: 3 hours.
(NEW COURSE)

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

Section A

Attempt any TWO questions. **(2×10=20)**

1. Explain features of object-oriented programming. Create a class **Distance** with private variables **feet** of type integer and **inches** of type floating point. Use suitable constructor, and methods for adding and comparing two distance objects. [Hint: 1 feet = 12 inches] (4+6)

2. Why do we need layout management? Explain any two layout managers with example. Write a simple GUI program that displays "Hello World" in a text field. The program should display output if user clicks a button. (2+4+4)

3. Define JSP. What are the benefits of using JSP? Create a HTML file with two text fields to first name and last name. Create a JSP file that reads data from the HTMLform and display full name. (1+3+6)

Section B

Attempt any EIGHT Questions. **(8×5=40)**

4. What is multithreading? How can you create multithreaded program in Java? Explain. (1 + 4)
5. What is grid layout? Compare grid layout with grid bag layout. (2 + 3)
6. Why do we need event handling? Explain the use of action event with example. (2 + 3)
7. Explain JDBC driver types. What is scrollable result set? (3 + 2)
8. Write Java programs that send messages with each other using TCP socket. (5)
9. What is JavaFX? Compare it with swing. Explain FlowPane layout of JavaFX. (1 + 2 + 2)
10. Compare JSP with servlet. What are different implicit objects in JSP? (2 + 3)
11. Define RMI. Explain architecture of RMI. (1 + 4)

12. Write short notes on: (2 × 2.5 = 5)
    a. Final class
    b. Result set