

CSc. 208-2075(NEW)★

Tribhuvan University  
Institute of Science and Technology  
2075



Bachelor Level / Second Year/ Third Semester/ Science  
**Computer Science and Information Technology (CSc. 208)**  
(Computer Architecture)  
**(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.*

**Long Questions:**

**Attempt any Two questions:**

(2×10=20)

1. In the RISC architecture, what is meant by overlapping register windows? Explain the relationship among register windows with overlapping register windows.
2. Explain the Flynn's classification of computer architectures with diagrams.

3. What are the different types of pipeline hazards? Explain each pipeline hazard with example.

**Short Questions:**

**Attempt any Eight questions:**

(8×5=40)

4. Explain the computer components.
5. Explain the store-program concept with example.
6. Differentiate between CISC and RISC architectures.
7. Differentiate between instruction pipeline and an arithmetic pipeline.
8. Divide 10/4 using non-restoring division.
9. Define associative memory. Explain with block diagram how it can be implemented.
10. Differentiate between hardwired control unit and a microprogrammed control unit.
11. How does DMA controller work? Give an example of DMA data transfer.
12. Explain an interconnection network and its use.