TRIBHUVAN UNIVERSITY FACULTY OF MANAGEMENT Office of the Dean May 2025

BIM / Third Semester / IT 236: Microprocessor and Computer Architecture

Candidates are required to answer the questions in their own words as far as practicable

Brief Answer Questions:

- 1. List out the components of microprocessor.
- 2. Define instruction code.
- 3. List out four major logic micro operation.
- 4. List out any two program control instruction.
- 5. What is data dependency problem?
- 6. Define priority interrupt.
- 7. What is the limitation of associative memory?
- 8. Define virtual memory.
- 9. Represent $(-10)_{10}$ using any two method.
- 10. Define SAP1.

Group "B"

Short Answer Questions: (Attempt any FIVE Questions)

- 11. Define RISC computer. List the major characteristics of RISC computers.
- 12. Explain multiplexed address / Data bus in 8085 microprocessor.
- 13. Illustrate and explain memory stack organization in basic computer.
- 14. Explain any three solutions for branch difficulties in pipelining.
- 15. Mention any three importane of I / O interface.
- 16. Design a hardwired organization for shift micro operation.

Group "C"

Long Answer Questions: (Attempt any THREE Questions)

- 17. Why we needed addressing modes? Explain different types of addressing modes used by 8085 microprocessor.
- 18. Illustrate and explain register organization with common ALU in basic computer.
- 19. Divide $(+10)_{10}$ by $(+4)_{10}$ using division algorithm.
- 20. Write an assembly language program that add two 16 bits numbers & store the result in memory location starting from 8000H.

Full Marks: 60 Pass Marks: 30 Time: 3 Hrs.

[10×1=10]

[5×3=15]

[3×5=15]

Group "A"

Group "D"

Comprehensive Answer / Case / Situation Analysis Questions:

21. What is the limitation of programmed I / O? Illustrate and explain the working principle of DMA.

22. Illustrate and explain the functional block diagram of 8085 microprocessor.

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[2×10=20]