Microprocessor – Last Minute Preparation Questions BCA 2nd Semester (Tribhuvan University)

Unit 1: Introduction to Microprocessors

1. Define microprocessor and explain its basic functions.
2. Differentiate between microprocessor, microcontroller, and microcomputer.
3. What are the major characteristics of a microprocessor?
4. Describe the applications of microprocessors in modern systems.
5. Explain the evolution of microprocessors from 4-bit to 64-bit architecture.

Unit 2: Architecture of 8085 Microprocessor

1. Draw and explain the block diagram of 8085 microprocessor.
2. List and explain the functions of general-purpose and special-purpose registers in 8085.
3. Explain the flag register and various condition flags used in 8085.
4. What is the function of the Program Counter and Stack Pointer?
5. Differentiate between address bus, data bus, and control bus.

Unit 3: Instruction Set and Operations

1. Define opcode and operand with examples.
2. Classify 8085 instructions based on their function.
3. What is addressing mode? List and explain different addressing modes in 8085.
4. Explain the difference between MOV, MVI, and LXI instructions.
5. Write the steps performed by 8085 during instruction execution.

Unit 4: Assembly Language Programming

1. Write an assembly language program to add two 8-bit numbers.
2. Write a program to find the largest number from an array of data.
3. Explain the use of labels and mnemonics in assembly programming.
4. What are the steps involved in assembling and executing a program in 8085?
5. Differentiate between assembler directives and instructions.

Unit 5: Interrupts and Timing

1. Define interrupt and explain its types in 8085.

2. Differentiate between hardware and software interrupts.
3. What is the priority order of interrupts in 8085?
4. Explain the role of INTR and INTA signals.
5. Define machine cycle and instruction cycle.

Unit 6: Interfacing and Applications

1. Explain the concept of I/O interfacing in 8085.
2. Differentiate between memory-mapped I/O and isolated I/O.
3. Describe the interfacing of a 7-segment display with 8085.
4. Write short notes on keyboard interfacing.
5. Explain the working of an ADC/DAC interfaced with 8085.