

CSC-153 MICROPROCESSOR

Assignment I

1. What is microprocessor and describe its applications in detail.
2. Explain Von Neumann architecture and highlight it's features. Compare it with Howard architecture.
3. What are the components of microprocessor based system? With the help of a block, explain in detail about each components.
4. Draw a block diagram of SAP-1 architecture and describe the function of
  - 🍏 8-bit “w” bus
  - 🍏 4-bit program counter
  - 🍏 4-bit memory address register (MAR)
  - 🍏 16x8 bit memory
  - 🍏 8-bit instruction register (IR)
  - 🍏 8-bit accumulator
  - 🍏 8-bit B register
  - 🍏 8-bit adder-subtractor
  - 🍏 8-bit output register
5. What is Instruction set? List the SAP-1 instructions. How the SAP1 instructions are identified?
6. What is microprogram? How can we generate microprogram for SAP-1?
7. What is machine cycle and instruction cycle? Explain the mechanism of complete execution of the SAP-1 instructions with examples.
8. Highlight the differences between SAP-1 and SAP-2 architecture and give insights to SAP-2 architecture.