

# MICROPROCESSOR AND ITS INTERFACING

Sub Code - ETT 521

Full Marks: 70

Time: 3 hours

Answer any **FIVE** Questions

The figures in the right-hand margin indicate marks

- 1) [2 +5 + 7]
- a) What is BUS? What are different buses in microprocessor?
  - b) What is the difference between SPR and GPR?
  - c) Draw and explain the pin diagram of 8085 microprocessor?
- 2) [2 +5 + 7]
- a) Write the flag register of 8085.
  - b) Explain about the evolution of microprocessor.
  - c) Explain briefly different addressing modes of 8085 with example.
- 3) [2 +5 + 7]
- a) What do you mean by DMA technique?
  - b) Draw the timing diagram of instruction MVI A, 90H (Assume Memory locations 8051 & 8052).
  - c) Explain the CALL instruction.
- 4) [2 +5 + 7]
- a) Define an instruction cycle.
  - b) What is time delay? Calculate the time delay for two register.
  - c) Explain the functional block diagram of 8259.
- 5) [2 +5 + 7]
- a) Give one example of 1-byte, 2-byte and 3-byte instruction.
  - b) What is interrupt? What are types of interrupt in 8085? Explain each with example.
  - c) Write an assembly language programme to find addition of two 8-bit nos whose sum is 16-bit
- 6) [2 +5 + 7]
- a) Differentiate between Hand assembler and Cross assembler.
  - b) Describe the operational mode of Intel 8253.
  - c) Design a Traffic Light Controller with a neat interfacing diagram with 8085 instruction.
- 7) [2 +5 + 7]
- a) What is the difference between instruction CALL and JUMP?
  - b) Explain the principle of operation of ADC 0801 with example.
  - c) Draw the functional block diagram of 8255 and explain each block.