

Part C

Answer any one full question from each module.

Each full question carries 12 marks.

MODULE I

11. (a) List all the internal registers in 8085, their abbreviations and lengths. Describe the function of each register? (7 marks)
- (b) Explain the necessity of S_0 and S_1 with appropriate examples. (5 marks)

Or

12. (a) Define and explain (i) instruction cycle, (ii) machine cycle, (iii) T-state. (3 marks)
- (b) Explain the different timing and control signals, with appropriate waveforms, used by 8085. (9 marks)

MODULE II

13. Write an 8085 ALP to multiply the 8 bit unsigned number in memory location 6200 H by the 8 bit unsigned number in memory location 6201 H. Store the 8 least significant bits of the result in memory location 6300 H and the 8 most significant bits in memory location 6301 H. (12 marks)

Or

14. (a) What do you mean by looping, counting and indexing? Explain with suitable examples. (6 marks)
- (b) What are the addressing modes used in the following instructions? Explain (i) MVI M, 04FH, (ii) IN 3, (iii) PUSH D, (iv) RET. (6 marks)

MODULE III

15. (a) What is a subroutine? How is it useful? Explain the use of stack in CALL and RETURN instructions, with suitable examples. (7 marks)
- (b) Explain restart as a software instruction. Describe the implementation of RST_5 . (5 marks)

Or

16. (a) Explain the instructions RIM and SIM with examples. (5 marks)
- (b) Explain how software delays can be implemented using counters? Illustrate with an example. (7 marks)