

MAY 2015

P/ID 40012/PPHM

Time : Three hours

Maximum : 100 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define the address bus.
2. What are Flags? Mention its use.
3. What is called Multiplexing the bus?
4. What is the function of ALE signal?
5. What is an Instruction cycle?
6. What are hand shake signals?
7. Define BSR mode of 8255A.
8. What is a control word?
9. Which is the unmaskable interrupt? Why?
10. What are EI instructions?

PART B — (5 × 6 = 30 marks)

Answer ALL questions.

11. (a) Draw the pin configuration of 8085 microprocessor and explain the function of various pins in it.
Or
(b) Explain various addressing modes used in 8085 programming with examples.
12. (a) Explain the interfacing circuit for interfacing R/W memory.
Or
(b) With a timing diagram, explain the Memory read operation.
13. (a) Explain the differences between the I/O mapped I/O and memory-mapped I/O techniques.
Or
(b) Discuss the absolute and partial decoding with suitable examples.
14. (a) List the major components of the 8279 keyboard/display interface, and explain their functions.
Or
(b) With a block diagram and graph explain the basic concepts of a 3-bit D/A Converter.

15. (a) Explain the instructions EI, DI and RST and their functions in microprocessor 8085 interrupt process.

Or

- (b) Describe the 8085 vectored interrupts.

PART C — (5 × 10 = 50 marks)

Answer ALL questions.

16. (a) Write an assembly language program to multiply two eight bit numbers by bit rotation technique. Explain the each instruction and its functioning with an example.

Or

- (b) Describe the instruction set of the 8085 microprocessor with examples.

17. (a) Write in detail about 2K × 8 and 4K × 8 ROM interface.

Or

- (b) Describe the process of memory and instruction fetch operations with necessary diagram.

18. (a) Write a main assembly language program and a flowchart for hexadecimal counter.

Or

- (b) Illustrate with timing diagram the 8085 bus contents and control signals when IN instruction is executed.

19. (a) Explain all the functions of 8255A classified according to two modes of operation.

Or

- (b) Explain the basic concepts of the successive-approximation A/D converter with circuit diagram.

20. (a) List the eight steps to initiate and implement the microprocessor 8085 interrupts.

Or

- (b) Design and implement an interrupt with a given RST instruction.
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