

MAY 2016

P/ID 40014/PPHP

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Time : Three hours

Maximum : 100 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. List the elements of the execution unit.
2. What are the lengths of the 8086's address bus and data bus?
3. Which flags are tested by the various conditional jump instructions?
4. How does the physical address generated?
5. What are the functions of a assembler directives?
6. List any two hardware related applications that require the use of assembly language programming.
7. What are flags that are stored in the PSW?
8. What is non-maskable interrupt?
9. Name any two pointer registers.
10. List the internal interrupts serviced by 8088.

PART B — (5 × 6 = 30 marks)

Answer ALL questions.

11. (a) Briefly describe the minimum-mode interface signals.

Or

- (b) Detail the bus interfaces unit of the 8086.

12. (a) Explain the different data transfer instructions.

Or

- (b) Elucidate the *stack* operation.

13. (a) Explain the flag control instructions.

Or

- (b) Describe the functions of segment registers and memory segmentation.

14. (a) Explain subroutine and subroutine handling instructions.

Or

- (b) Explain the functions of interrupt control registers.

15. (a) Explain interrupt vector table.

Or

- (b) Explain commands that get data from ROM.

PART C — (5 × 10 = 50 marks)

Answer ALL questions.

16. (a) Describe the functions of the internal registers of 8086 microprocessor.

Or

- (b) Describe the various types of addressing modes of 8086.

17. (a) Describe the assembly language programming using MASM with an example.

Or

- (b) Explain the functions of various groups of instruction set of 8086.

18. (a) Describe the DMA interface for the 8088-based microcomputer using 8237.

Or

- (b) Describe the functions of memory control signal.

19. (a) Describe the serial communication interface techniques.

Or

- (b) Describe the read-only memory interface with necessary block diagram.

20. (a) Describe the internal architecture and functions of 8151A USART.

Or

- (b) Describe the internal architecture of the 8259 Programmable Interrupt Controller.
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