Reg. No. : | | | | | | | | | | |

Question Paper Code: 41552

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Fifth Semester

Electronics and Instrumentation Engineering

14UEI502 - MICROPROCESSORS AND INTERFACING

(Regulation 2014)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The first Microprocessor was

   (a) Intel 4004 (b) 8080 (c) 8085 (d) 4008

2. What does ALE stands for?

   (a) Address Latch Enable (b) Address Level Enable
   (c) Address Leak Enable (d) Address Leak Extension

3. Which of the following is not an arithmetic instruction?

   (a) INC (Increment) (b) CMP (Compare)
   (c) DEC(Decrement) (d) ROL (Rotate left)

4. Which group of instructions do not affect the flags?

   (a) Arithmetic operations (b) Logical operations
   (c) Data transfer operations (d) Branch operations

5. Which method bypasses the CPU for certain types of data transfer?

   (a) Software Interrupts (b) Interrupt – driven I/O
   (c) Polled I/O (d) Direct Memory Access (DMA)

6. Mention the type of IC 8253

(a) Programmable interrupt controller (b) Programmable interval timer
(c) Programmable peripheral interface (d) Keyboard display controller

7. How many bits wide is the address bus in 8086 Microprocessor ?s.

(a) 12 bit (b) 10 bit (c) 16 bit (d) 20 bit

8. In which mode is the 8086 operates if MN/MX is low?

(a) Minimum (b) Maximum (c) Both (a) & (b) (d) Medium

9. The IF Flag is called as

(a) Initial Flag (b) Indicate Flag (c) Interrupt Flag (d) Inter Flag

10. IMUL source is a signed

(a) Multiplication (b) Addition (c) Subtraction (d) Division

PART - B (5 x 2 = 10 Marks)

11. Mention the functions of ALE and READY pins of 8085.

12. List the importance of Lookup table for programming.

13. What is debouncing?

14. Illustrate the pipelined architecture.

15. List the instructions of 8086 that affects only carry flag.

PART - C (5 x 16 = 80 Marks)

16. (a) Draw the pin diagram of 8085 and explain the function of each pin. (16)

Or

(b) Draw the architecture of 8085 and explain each block in detail. (16)

17. (a) Give the classification of 8085 instructions and explain any SIX instructions by choosing any one category of instruction set in detail. (16)

Or

(b) Develop an Assembly language program to sort an array of numbers in ascending order using the 8085 microprocessor. (16)

18. (a) Draw the internal architectural diagram of 8279 and explain its functioning. (16)

Or

(b) Write short notes on ADC interfacing. (16)

19. (a) Draw the internal architecture of 8086 and explain the function of special purpose registers. (16)

Or

(b) Elaborate various addressing modes of 8086 with suitable examples. (16)

20. (a) How do you classify instructions of 8086? Give examples for each classification. (16)

Or

(b) Explain Assembly directives, Procedures and Macros with examples. (16)

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