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Question Paper Code: 55033

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

Fifth Semester

Electrical and Electronics Engineering

15UEE503 - MICROPROCESSORS AND MICROCONTROLLER PROGRAMMING

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- The Address bus of 8085 microprocessor is
 - 8-bit
 - 24-bit
 - 16-bit
 - 32-bit
- The number of flags of the 8085 microprocessor is
 - 6
 - 5
 - 4
 - 3
- The SUB A instruction makes the 8085 microprocessor
 - resets the zero flag
 - sets the zero flag
 - sets the carry flag
 - resets the auxillary carry flag
- STA 9000H is an instruction of
 - one bytes
 - two bytes
 - three bytes
 - four bytes
- The 8051 microcontroller can support
 - 5 interrupts
 - 4 interrupts
 - 3 interrupts
 - 2 interrupts
- Which of the following registers can be used as two individual 8-bit register?
 - DPTR
 - PC
 - SBUF
 - PSW
- The number of 4K * 4 memory devices are required for 16K * 8 memory?
 - 2
 - 3
 - 4
 - 8
- How many seven-segment displays can be connected with 8279?
 - 16
 - 12
 - 10
 - 8
- Which of the following instruction is incorrect?
 - CPL A
 - SWAP A
 - CLR C
 - RL B

10. What will be the contents of A register after execution of instruction RRC A. Assume the contents of A before execution is C5H and carry is zero?

(a) 62

(b) 26

(c) 66

(d) 22

PART - B (5 x 2 = 10 Marks)

11. What is maskable and non-maskable interrupt in 8085.

12. Distinguish between JMP and CALL instructions.

13. What are the general-purpose registers of 8051?

14. Define ADC. What are the types of ADC?

15. What are the instructions to access the program memory?

PART - C (5 x 16 = 80 Marks)

16. (a) Explain the architecture of 8085 with neat diagram. (16)

Or

(b) With neat timing diagram explain Memory read and I/O write in detail. (16)

17. (a) (i) Explain addressing modes of 8085 in detail with example. (8)

(ii) Explain about the arithmetic instruction set in 8085 processor. (8)

Or

(b) Write an assembly language to find largest number and ascending order of six inputs. (16)

18. (a) Explain the pin diagram of 8051 with a neat diagram. (16)

Or

(b) Explain the timers of 8051 in detail with the control words. (16)

19. (a) Explain in detail about how DMA is interfaced to 8085. (16)

Or

(b) Explain how 8279 is interfaced with 8085 and its various modes. (16)

20. (a) Explain the data manipulation and I/O Instruction set of 8051 in detail with example. (16)

Or

(b) Explain about the washing machine controller in detail. (16)