C

Reg. No. :

Question Paper Code: 55403

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Fifth Semester

Electronics and Communication Engineering

15UEC503 - MICROPROCESSORS, MICROCONTROLLERS AND APPLICATIONS

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Intel 8086 has _____ bit address bus.   CO1- R

    (a) 20   (b) 16   (c) 8   (d) 32

2. The data bus buffer is controlled by_____   CO2- U

    (a) Control word register   (b) Read/write control logic

    (c) Data bus   (d) None of the above

3. The bit size of the 8051 microcontroller is _____   CO3- R

    (a) 8   (b) 4   (c) 16   (d) 32

4. Which of the following is not one of the SFR addresses of the ports of 8051?   CO4- U

    (a) 80H   (b) 90H   (c) A0H   (d) None of the above

5. In AVR, which of the following registers are not used for programming timers?   CO5-U

    (a) TCNT   (b) TCON   (c) TIFR   (d) None of the above

PART – B (5 x 3= 15Marks)

6. Give the need of timing diagram.   CO1- U

7. Compare the memory mapped I/0 and standard I/0 mapped I/0.   CO2- R

8. List the operating modes of port -A 8255.   CO3- R

9. Explain DJNZ instructions of intel 8051 microcontroller   CO4- R

10. Compare tiny AVR and Atmega AVR.   CO5- U

PART – C (5 x 16= 80Marks)

11. (a) Explain the architecture of 8086 with its significant. CO1- U (16)

Or

(b) Explain the signals in Minimum mode and maximum mode of 8086 in detail. CO1- U (16)

12. (a) Explain the operating modes of 8251 with its associated signal timings. CO2- U (16)

Or

(b) Describe the DMA interfacing with suitable diagram. CO2- U (16)

13. (a) Briefly discuss about the timer and counter programming in 8051with suitable examples. CO3- U (16)

Or

(b) Explain the architecture of 8051 and it's associated SFR with suitable sketch. CO3- U (16)

14. (a) Interface an LCD display to 8051 and write an ALP to display a message string using 8051. CO4- App (16)

Or

(b) Demonstrate the interfacing of the stepper motor with 8051 and explain its interfacing diagram and develop program to rotate the motor in clockwise direction. CO4- App (16)

15. (a) Explain with a neat sketch about the architecture of ATMEL AVR 8 bit controller. CO5- U (16)

Or

(b) Explain the addressing modes of AVR micro controller. CO5- U (16)

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