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Question Paper Code: 45405

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

Fifth Semester

Electronics and Communication Engineering

14UEC505 - MICROPROCESSORS, MICROCONTROLLERS AND APPLICATIONS

(Regulation 2014)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. List out 16 bit Registers

    (a) Accumulator   (b) Stack pointer
    (c)BC Register   (d)All the above

2. Why is 8085 processor called as 8 bit processor?

    (a) Has 8 bit ALU   (b) Has 8 bit Data bus
    (c) None of these   (d) Both (a) and (b)

3. Which bus is bidirectional?

    (a) Address bus   (b) Control bus
    (c) Data bus   (d) None of these

4. The end of a macro can be represented by the directive

    (a) END   (b) ENDS   (c) ENDM   (d) ENDD

5. Programmable peripheral input-output port is other name for

    (a) serial input-output port   (b) parallel input-output port
    (c)) serial input port   (d) parallel output port

6. In 8086 microprocessor the following has the highest priority among all type interrupts?

    (a) NMI   (b) DIV 0   (c) TYPE 255   (d) OVER FLOW

7. What is SJMP?

    (a) Short Jump   (b)Stack Jump

    (c)Synchronize Jump   (d) State Jump

8. When 8051 wakes up then 0x00 is loaded to which register?

    (a) DPTR   (b) Stack pointer

    (c) PC   (d) PSW

9. If we push data onto the stack then the stack point

    (a) increases with every push   (b) decreases with every push

    (c) none of the above   (d) increases with only push

10. How many 16 bit registers are available in 8051?

    (a) 1   (b) 2   (c) 3   (d) none of these

PART - B (5 x 2 = 10 Marks)

11. Explain various types of Instructions used in 8085.

12. Draw the HOLD response timing cycle in Minimum mode of 8086.

13. Draw the block diagram of Programmable Interrupt Controller (8259).

14. How do you select the register banks of 8051?

15. What is the necessity to interface DAC with microcontroller?

PART - C (5 x 16 = 80 Marks)

16. (a) Define Interrupts .What are its various types? How are Interrupts operated in 8085.

                                                  (16)

Or

(b) Write an assembly language program for Sorting of Numbers in ascending order using 8085.   (16)

45405

17. (a) With a neat sketch draw and explain the Internal architecture of 8086. (16)

Or

(b) (i) Discuss the various Addressing Modes of 8086. (8)

(ii) List out the different types of Instruction used in 8086. (8)

18. (a) With functional block diagram, explain the operation and programming of 8251 USART in detail. (16)

Or

(b) Draw the architectural block diagram of a DMA controller and explain its operation. (16)

19. (a) Discuss 8051 Microcontroller Hardware Architecture with a neat diagram. (16)

Or

(b) Brief about 8051 Microcontroller ports in detail. (16)

20. (a) Describe the Analog to Digital Conversion (ADC) Interfacing with 8051. (16)

Or

(b) Explain how intelligent LCD displays can be interfaced with 8051 Microcontroller? Write an assembly language program for the same. (16)

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45405

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