A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 55501

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

Fifth Semester

Electronics and Instrumentation Engineering

15UEI501 - MICROPROCESSOR AND MICROCONTROLLER INTERFACING

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

PART A - (10 x 1 = 10 Marks)

Answer All Questions

1. What is meant by ALU? CO1- R

   (a) Arithmetic Logic Upgrade (b) Arithmetic Logic Unsigned

   (c) Arithmetic Local Unsigned (d) Arithmetic Logic Unit

2. Which is not the control bus signal CO1- R

   (a) Read (b) Write (c) Reset (d) none of these

3. CALL is a _____ instruction in 8085. CO2- U

   (a) 1 byte (b) 2 byte (c) 3 byte (d) 4 byte

4. Stack words on CO2- U

   (a) LILO (b) LIFO (c) FIFO (d) none of these

5. Which of the following is not a mode of data transmission 8251? CO3- R

   (a) Simplex (b) Duplex

   (c) Semi duplex (d) None of these

6. The pin that clears the control word register of 8255 when enabled is CO3- R

   (a) CLEAR (b) SET (c) RESET (d) CLK

7. The addressing mode in instruction PUSH B is CO4- R

   (a) direct (b) register (c) register indirect (d) immediate

8. How many bytes of bit addressable memory is present in 8051 based micro controllers? CO4- R

(a) 8 bytes (b) 32 bytes (c) 16 bytes (d) 128 bytes

9. Which of the following instructions will move the contents of the accumulator to register 6? CO5- R

(a) MOV 6R, A (b) MOV R6, A (c) MOV A, 6R (d) MOV A, R6

10. Which one of the following ICs is used to interface keyboard and display? CO5- R

(a) 8251 (b) 8279 (c) 8259 (d) 8253

PART – B (5 x 2= 10Marks)

11. What is the function of program counter in 8085 microprocessor? CO1- U

12. List the features of RISC architecture. CO2- R

13. What are the basic modes of operations of 8255? CO3- R

14. Write the instruction format for 8051 microcontroller. CO4- U

15. What are the control signals from 8051 microcontroller required for washing machine control? CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Recognize the different addressing modes in 8085 microprocessor and discuss each mode with an example. CO1-U (16)

Or

(b) Discuss about basic concepts in memory interfacing with 8085. CO1-U (16)

17. (a) Draw timing diagrams for the following instruction with appropriate control and status signal. Explain in brief.
STA 4200. CO2 -U (16)

Or

(b) (i) Write a 8085 assembly language program to divide a 8 – bit number by another 8 – bit number and store the remainder and quotient in memory location 4252 and 4253 respectively. CO2 -U (8)

(ii) Write a assembly language program to data transfer from memory block B1 to memory block B2. CO2 -U (8)

18. (a) With neat block diagram explain 8255 PPI. CO3- U (16)

Or

	(b)	Draw and explain the logical block diagram of 8279 keyboard display controller and explain.	CO3- U	(16)
19.	(a)	Explain about the signals of 8051 with necessary diagram.	CO4- U	(16)
		Or		
	(b)	What are the modes of serial communication in 8051? Explain in detail about setting up serial port modes.	CO4 -U	(16)
20.	(a)	With a neat circuit diagram explain how a 4 x4 keypad is interfaced with 8051 microcontroller and write 8051 ALP for keypad scanning.	CO5- Ana	(16)
		Or		
	(b)	With a neat diagram explain the about the controlling techniques of washing machines.	CO5- Ana	(16)

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