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

Question Paper Code: 54B01

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

Fifth Semester

Biomedical Engineering

15UBM501 -MICROPROCESSOR AND MICROCONTROLLER

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The address bus is a group of _____ CO1- R

   (a) 8 lines (b) 10 lines (c) 16 lines (d) 12 lines

2. The addressing mode in instruction CMP M is CO1- R

   (a) Direct (b) Register (c) Indirect (d) Implied

3. The _____ instruction tells the assembler the address of the memory location for the next instruction or data byte should be assembled. CO2- R

   (a) ORG (b) OGR (c) RGN (d) CLR

4. Which one of the following is not a one byte instruction set of 8085? CO2- R

   (a) CMP M (b) CMA (c) MOV A,M (d) MVI A,08H

5. The microcontroller 8051 has _____ ports CO3- R

   (a) 2 (b)4 (c)8 (d)16

6. What are the status of the carry, auxiliary carry and parity flag affected if the write instruction CO3- R

   MOVA,#9C
   ADD A,#64H

   (a) CY=0,AC=0,P=0 (b) Y=1,AC=1,P=0 (c) CY=0,AC=1,P=0 (d) CY=1,AC=1,P=1

7. Telephone modem is one of the examples of _____ CO4-R

(a) ADC (b) DAC (c) BOTH (d) NONE

8. The following 8051 port is not having multi-functionalities CO4- R

(a) Port 0 (b) Port 1 (c) Port 2 (d) Port 3

9. RISC is a _____ type architecture. CO5- R

(a) Harvard (b) Von Neumann (c) both (d) none

10. Working Register is also called as CO5- R

(a) Status Register (b) A Register (c) PCL register (d) PC

PART – B (5 x 2= 10Marks)

11. Define instruction cycle CO1- R

12. Give a description about non-maskable interrupt CO2- U

13. List the types of operand in 8051 CO3- R

14. Write about the serial port interface of mode 0. CO4- U

15. Write the operations of co-processor CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Draw and explain the functional block diagram of 8085 microprocessor. CO1-U (16)

Or

(b) Illustrate the 8086 microprocessor with neat functional block diagram and explain them in detail. CO1-U (16)

17. (a) Discuss the Interrupts available in 8085 with an example. CO2-U (16)

Or

(b) Write a program me to introduce 1msec delay in the main programme. Assume 4MHz crystal is used in μp CO2-App (16)

18. (a) Explain the Special Function Registers (SFR) in 8051 CO3- U (16)

Or

(b) Write an 8051 assembly language program to perform any two arithmetic operations on two 8 bit data. CO3-App (16)

19.	(a)	Draw the circuit diagram to interface an LCD display with 8051 microcontroller and explain how to display a character using LCD display.	CO4- U	(16)
		Or		
	(b)	Explain the keyboard interfacing in 8051	CO4- Ana	(16)
20.	(a)	Explain the architecture of PIC processor	CO5- U	(16)
		Or		
	(b)	Discuss the ARM register in detail	CO5- U	(16)