Reg. No. :

Question Paper Code: 95B01

B.E./B.Tech. DEGREE EXAMINATION, MAY 2022

Fifth Semester

Biomedical Engineering

19UBM501 – MICROPROCESSORS AND MICROCONTROLLERS

(Regulation 2019)

Duration: Three hours   Maximum: 100 Marks

PART – A (10 x 2= 20Marks)

(Answer any 10 out of 15)

1.	Write a program for storing data in memory using direct addressing of 8085.	CO2- A
2.	How single stepping can be done in 8086?	CO1- U
3.	Discuss the function of instruction queue in 8086.	CO1- U
4.	Write a program using 8051 assembly language to add two BCD numbers.	CO2- A
5.	Write a program to perform addition of 2 numbers using 8051.	CO2- A
6.	Describe the difference between the instructions PUSH and POP with an example.	CO1- U
7.	Write a program for square wave generation.	CO2- A
8.	Write short notes on Key bouncing.	CO1- U
9.	State the function and application of stepper motor.	CO1- U
10.	Associate the benefits of RISC architecture?	CO1-U
11.	Differentiate Microcontroller and PIC microcontroller	CO1-U
12.	Write short notes about PIC Microcontroller?	CO1 -U
13.	Summarize the features of ARM processor.	CO1-U
14.	Group the different operating modes of ARM processor	CO1-U
15.	List the instruction set of ARM processor.	CO1-U

PART – C (5 x 16= 80 Marks)

16. (a) With neat sketch explain the architecture of 8085. CO1-U (16)

Or

    (b) Explain the addressing modes of 8085 with the help of examples. CO1-U (16)

17. (a) Write an Assembly language program for arithmetic operations using 8051. CO2-Ana (16)

Or

    (b) Write an Assembly language program to find the biggest number in a block of data stored in the memory locations 70H-7FH. CO2-Ana (16)

18. (a) Write an ALP in 8051 for waveform generation. CO2- Ana (16)

Or

    (b) Write an ALP in 8051 for converting analog signal into digital signal. CO2- Ana (16)

19. (a) Summarize the addressing modes of PIC micro controller with clear examples. CO1- U (16)

Or

    (b) With perfect examples describe the instruction set of PIC micro controller. CO1- U (16)

20. (a) With neat sketch explain the architecture of ARM processor. CO1- U (16)

Or

    (b) Interpret the instructions of ARM processor for implementing the program. CO3- Ana (16)