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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 8011

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – MAY / JUNE 2024

Fifth Semester

Electrical and Electronics Engineering

U19EE516 – MICROPROCESSORS AND MICROCONTROLLERS

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Draw the Pin diagram of 8085 microprocessor.	2	K1	CO1
2.	List the interrupts of 8085.	2	K1	CO1
3.	How we can move the data from one register to another? Give two examples for instructions.	2	K2	CO2
4.	Describe the usage of stack pointer in branch instructions.	2	K3	CO2
5.	Distinguish between Microprocessor and Microcontroller.	2	K4	CO3
6.	What are the features of timer/counter of 8051?	2	K2	CO3
7.	Define baud rate.	2	K3	CO4
8.	Write the advantages of 8255 IC.	2	K1	CO4
9.	How 8051 is useful for implementing traffic light control?	2	K1	CO5
10.	What is the main idea of PWM in motor control using microcontroller?	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Describe the features in the hardware architecture of 8085 microprocessor with neat diagram.	13	K2	CO1
	(OR)			
b)	Explain the addressing modes in 8085.	13	K2	CO1
12. a)	Explain the various Arithmetic, Logical, instructions used in 8085 microprocessors.	13	K2	CO2
	(OR)			
b)	Write the assembly language program for BCD to Binary code conversion.	13	K3	CO2
13. a)	Explain the working of memory organizations and SFR register building blocks of 8051 microcontroller in detail.	13	K4	CO3
	(OR)			
b)	Describe the function of microcontroller instructions for performing data transfer, logical, arithmetic operations with examples.	13	K4	CO3
14. a)	With neat diagram, describe the internal block diagram of Keyboard and display controller (8279).	13	K1	CO4
	(OR)			
b)	Explain the operation of serial communication interface with neat diagram.	13	K2	CO4
15. a)	Explain briefly about the interfacing of RTC with 8051.	13	K2	CO5
	(OR)			
b)	Explain the working Servo motor interfacing with 8051 and also write the mnemonics.	13	K4	CO5

PART – C

(1 x 15 = 15Marks)

Q.No.	Questions	Marks	KL	CO
16. a)	Illustrate in details about the architecture of 8051 Microcontroller with neat diagram.	15	K4	CO3
	(OR)			
b)	Explain the working Traffic Light Control system and Write the Program code to interface it with microcontroller.	15	K4	CO5