Question Paper Code: R14A32EC02

R14

ANURAG Engineering College

(An Autonomous Institution)

III B.Tech II Semester Supplementary Examinations, Dec–2023/Jan-2024

MICROPROCESSORS AND MICROCONTROLLERS

(ELECTRONICS AND COMMUNICATION ENGINEERING)

Time: 3 Hours **Max.Marks:75**

Section – A (Short Answer type questions) (25 Marks)

Answer All Questions		Course Outcome	B.T Level	Marks
1.	What is the need for the ALE pin in 8086?	CO1	L1	2M
2.	What is the use of MN/MX signals in 8086?	CO1	L1	3M
3.	What is an assembler?	CO2	L1	2M
4.	Explain the NEAR and FAR assembler directives.	CO2	L2	3M
5.	Write the input/output feature in Mode 0 for the 8255A PPI?	CO3	L1	2M
6.	Give the control word structure of 8255 PPI.	CO3	L1	3M
7.	Give the flag structure of 8051 microcontroller.	CO4	L1	2M
8.	List sixteen-bit registers of 8051.	CO4	L1	3M
9.	What is Interrupt Service Routine?	CO5	L1	2M
10.	Explain TMOD function register of 8051.	CO5	L2	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A)	Explain the various addressing modes used in 8086 microprocessors.	CO1	L2	10M
	OR			
B)	Draw and discuss the pin configuration of 8086.	CO1	L3	10M
12. A)	What are assembler directives? List and explain different assembler directives with suitable examples.	CO2	L3	10M
	OR			
B)	Describe the IF-THEN-ELSE, WHILE-DO, REPEAT-UNTIL and FOR-LOOP structure of writing the programs with an example for each.	CO2	L3	10M
13. A)	Draw and explain the interfacing of 8259 with 8086?	CO3	L2	10M
	OR			
B)	Draw block diagram of 8255 and explain its modes of operation.	CO3	L2	10M
14. A)	Draw and discuss the Architecture of 8051.	CO4	L3	10M
	OR			
B)	Write an assembly program to multiply two 16-bit numbers for 8051 microcontroller.	CO4	L3	10M
15. A)	Discuss on External Interrupts of 8051.	CO5	L3	10M
	OR			
B)	Explain interfacing of Seven Segment display with 8051 microcontroller.	CO5	L2	10M