Question Paper Code: R18A31EC02

R18

ANURAG Engineering College

(An Autonomous Institution)

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

MICROPROCESSORS AND MICROCONTROLLERS

(COMMON TO ECE & CSE)

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

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

Answer All Questions

		Course Outcome	B.T Level	Marks
1.	Define Accumulator.	CO1	L1	2M
2.	What is the difference between service routine and sub routine?	CO1	L2	3M
3.	What is the need for DMA controller? Explain.	CO2	L1	2M
4.	Write the control word of 8251 USART.	CO2	L2	3M
5.	What is the address range of internal ROM of 8051?	CO3	L1	2M
6.	Write about PSW register.	CO3	L2	3M
7.	Define baud rate.	CO4	L1	2M
8.	What is the difference between software and hardware interrupt?	CO4	L2	3M
9.	What is Arduino?	CO5	L1	2M
10.	List out the advantages of Arduino.	CO5	L2	3M

Section B (Essay Questions)

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

11. A)	Define addressing mode and explain different addressing modes presented in 8086 microprocessor.	CO1	L2	10M
	OR			
B)	Draw the minimum mode pin diagram of 8086 microprocessor and Explain each pin in detail.	CO1	L3	10M
12. A)	With a neat Diagram Explain the architecture of 8255.	CO2	L2	10M
	OR			
B)	Draw a circuit diagram to interface 8251 with 8086 and explain.	CO2	L3	10M
13. A)	Explain the pin configuration of 8051 controller.	CO3	L2	10M
	OR			
B)	Explain different types of addressing modes in 8051 microcontroller.	CO3	L2	10M
14. A)	Describe how the priority of the interrupts handled in 8051 microcontroller.	CO4	L2	10M
	OR			
B)	Discuss about the operation of different timer modes of 8051 microcontroller.	CO4	L3	10M
15. A)	Write down the basic I/O functions used in Arduino programming.	CO5	L2	10M
	OR			
B)	What is the basic difference between setup function and loop function in Arduino programming? Explain with a suitable example.	CO5	L3	10M