

**ANURAG Engineering College**

(An Autonomous Institution)

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

**MICROPROCESSORS AND MICROCONTROLLERS****(ELECTRICAL AND ELECTRONICS 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. Define a Microprocessor.	CO1	L1	2M
2. Write the significance of ALE pin.	CO1	L2	3M
3. Define debouncing.	CO2	L1	2M
4. What are the functions performed by INTEL8251A.	CO2	L2	3M
5. Define baudrate.	CO3	L1	2M
6. Write the differences between Microcontroller and Microprocessor.	CO3	L2	3M
7. Define serial communication.	CO4	L1	2M
8. Write the differences between software and hardware interrupts.	CO4	L2	3M
9. Write the applications of Proteus software.	CO5	L1	2M
10. Write the difference between Arduino and 8051 microcontrollers.	CO5	L2	3M

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

11. A) Write an assembly language program to convert binary number to BCD number.	CO1	L3	10M
<b>OR</b>			
B) Describe the importance of assembler directives.	CO1	L3	10M
12. A) Describe the operation of USART.	CO2	L3	10M
<b>OR</b>			
B) Describe different modes of operation of 8255.	CO2	L3	10M
13. A) Write short notes on memory organization of 8051.	CO3	L3	10M
<b>OR</b>			
B) Describe the different types of instructions used in 8051 microcontrollers.	CO3	L3	10M
14. A) Discuss about timer operation in different modes.	CO4	L3	10M
<b>OR</b>			
B) Write short notes on SCON and PCON registers.	CO4	L3	10M
15. A) Write a program for blinking led by using Arduino.	CO5	L3	10M
<b>OR</b>			
B) How to simulate Arduino and LCD using Proteus.	CO5	L3	10M