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Question Paper Code: U4425

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2024

Fourth Semester

Computer Science and Engineering

21UEC425-MICROPROCESSORS AND MICROCONTROLLERS

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5Marks)

- The registers of 8086 are ___ bits in size. CO1-U
(a) 8 (b)12 (c) 16 (d) 20
- The generation of a square wave is possible in the mode CO1-U
(a) Mode1 (b) Mode2 (c) Mode3 (d) Mode4
- What is the bit size of the 8051 micro controller ? CO1-U
(a) 8bit (b) 4 bit (c)16bit (d) 32 bit
- For writing commands on an LCD,RS bit is CO1-U
(a) Set (b) Reset (c) Set& Reset (d) none of the above
- How many RPO status bits are required for the selection of two CO1-U
Register banks?
(a)1 (b) 2 (c)8 (d)16

PART – B (5 x 3= 15 Marks)

- If the stack segment register contains 3000 Hand the stack pointer register contains 8434H, what is the physical address of the top of the stack? CO2-App
- Define Baud rate. CO1- U
- Distinguish polling and interrupt mechanism. CO1- U
- What is the function of pin no5 & 6 in LCD? CO1- U
- List the applications of aurdino. CO1- U

PART – C (5 x 16= 80Marks)

- 11 (a) Explain about interrupt handling process in 8086. CO1 –U (16)
Or
(b) Define Addressing modes. What are the different Addressing mode so 8086 microprocessor? Explain each addressing mode with examples? CO1- U (16)
- 12 (a) Discuss in detail about the type of interfacing device is needed to transfer the data serially with 8086. CO1- U (16)
Or
(b) Explain in detail about DMA controller with a neat sketch. CO1- U (16)
- 13 (a) Explain about different instruction set associated with 8051micro controller. CO1- U (16)
Or
(b) Describe the internal architecture of 8051 microcontroller with neat diagram. CO1- U (16)
- 14 (a) Assume that he 8255 is interfaced to the 8051at the addresses 8000H-8003. Write a program to read the content of Port A and write it in other ports. CO3- App (16)
Or
(b) Interface step premotor with 8051microcontroller and develop a code to rotate the motor in clock wise direction. CO3- App (16)
- 15 (a) Interface LCD with aurdino microcontroller and develop Code for the same. CO3- App (16)
Or
(b) How motor speed is controlled by PWM develop a code for it. CO3- App (16)