| Time: | 3Hours Total Marks: 80 | |
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| N.B: | | |
| 1. | Question no.1 is compulsory. | |
| 2. | Attempt any three questions out of the remaining five. | E.V |
| 3. | All questions carry equal marks. | |
| 4. | Assume suitable data, if required and state it clearly. | |
| O.1 an | swer any four. | [20] |
| | a) Explain the use and advantage of pipelining feature in 8086 architecture. | |
| | b) Explain arithmetic instructions of 8051 microcontroller with example. | 163 |
| | c) Explain physical address in 8086 processor. | |
| | d) Compare Minimum mode and Maximum mode. | |
| | e) Compare Microprocessor and Microcontroller. | J á |
| | | , D |
| Q.2 | a) Explain the following 8086 instructions with example. | [10] |
| | i) CMPSB ii) DIV AX iii) LOOPE again iv) REP SCASB v) XLATB | 6 |
| | b) Explain block diagram of 8255 PPI. | [10] |
| | | |
| Q.3 | a) Explain addressing modes of 8051 | [10] |
| | b) Write an assembly program to divide a 16-bit number by an 8-bit number. | [10] |
| Q. 4 | a) Explain types of interrupts and ISR in 8086. | [10] |
| | b) Write 8051 assembly language program to checks whether the ten number | |
| | from external RAM memory address, 2000H are odd or even. The program shou | |
| | accordingly 00H/FFH from internal location 30H onwards. | [10] |
| | | |
| Q. 5 | a) Explain the block diagram of 8259 Programmable Interrupt Controller in deta | il. What |
| | are different operating modes of 8259 PIC. | [10] |
| | b) Write an 8051 assembly program that uses Timer 0 to generate a delay of 1 | second. |
| | Use this delay to toggle an LED connected to Port 0. | [10] |
| | | |
| Q. 6 W | Vrite short note on (Any 3) | [20] |
| | Memory segmentation | |
| 2. | Interfacing of a DC motor to microcontroller. | |
| 3. | ICW's and OCW's in 8259 | |
| 4. | 8284 clock generator | |
| 7 | | |
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