using 8284. 10

UNIT - II

Q.3 (a) Explain with help of examples the various addressing modes available in Intel 8086. 12

(b) Explain with the help of examples the difference between Branch and loop instructions of 8086 microprocessor. 8

Q.4 (a) Explain the directives: ASSUME, ENDP, EXTRN, OFFSET EQU, ORG and SUM. 10

(b) Write a delay loop which produces a delay of 500μs on an 8086 with a 5 MHz clock. 6

(c) Contrast between procedures and Macros. 4

UNIT - III

Q.5 (a) List the advantages of Memory Segmentation. Discuss how segmentation is useful in 8086 microprocessor and also explain Memory Segmentation in 8086 microprocessor. 10

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ECE- 311 - E :Microprocessors & Interfacing

Time : Three Hours Maximum Marks : 100

Note:- Attempt Five questions in all, selecting at least one question from each unit. All questions carry equal marks.

UNIT - I

Q.1. (a) Differentiate between RISC and CISC based systems. What are two units makeup the 8086 processor. Explain the functioning of BIU and EU. 10

(b) Explain the Block architecture of 8086. Draw and discuss 8086 flag register format. 10

Q.2 (a) What is difference between the min and max mode as applied to the 8086 microprocessor. What is the difference between real mode and protected mode of X86 microprocessors? 10

Q.8 (a) Contrast a memory-mapped I/O system with an isolated I/O system. What is memory to memory DMA transfer? Describe the function of the 8237 DMA controller when used for DMA transfer. Explain how 8237 can be connected to the 8086 microprocessor. 15

(b) Write note on interfacing alphanumeric display with 8086. 5

for an 8086 system operating in maximum mode. 6

(c) Explain why DMA data transfer faster than doing the same data transfer with program instructions. 4

Q.6 (a) List the main differences between page mode operation and static column mode operation of a bank of DRAMs. Explain Read/Write timing diagram in minimum and maximum mode operation of 8086. 15

(b) Write short note on address decoding techniques. 5

UNIT - IV

Q.7 (a) What is the advantages of handshaking in I/O operations? Discuss the different mode of operation of 8255 and its interfacing to 8086 microprocessor. 10

(b) Explain the internal block diagram and initializing steps of an Intel 8259 priority interrupt controller. 10