Date: 27/05/2015

S.E-Sem IV-CBGS-Extc-MP

(145)

QP Code : 3615

Time: 3 Hours **Max. Marks: 80**

Note: **Question number 1 is compulsory.**
Solve any THREE out of remaining.
Assume suitable data if necessary.

Q.1 Attempt any **FOUR**

(A) Explain flag register used in 8085 processor. **(5)**

(B) Explain what is the need and advantages of memory segmentation in 8086 Microprocessor. **(5)**

(C) Explain addressing modes of 8086 Microprocessor. **(5)**

(D) Write a program to blink bit 4 of port C using BSR mode of 8255. **(5)**

(E) Write features of 80486 Microprocessor. **(5)**

Q. 2 (A) Design an 8086 based system with the following specifications. **(20)**

(1) 8086 working at 6 MHz at minimum mode.

(2) 32 KB EPROM using 16 KB devices.

(3) 64 KB RAM using 32 KB devices.

(4) 2, 8-bit i/p & 2, 8-bit o/p ports in Memory mapped I/O.

Design system with absolute decoding. Clearly show memory address map and I/O address map. Draw a neat schematic for chip selection logic.

Q.3 (A) Draw & Explain Interrupt structure of 8086 Microprocessor with its IVT. **(10)**

(B) Draw & Explain interfacing of DAC 0808 with 8086 Microprocessor using 8255. Write a program to generate square wave. **(10)**

Q.4 (A) Explain interfacing of 8087 co-processor with 8086 Microprocessor. **(10)**

(B) Draw timing diagrams of memory read & memory write machine cycles for maximum mode of 8086 Microprocessor. **(10)**

Q.5 (A) Explain MODE 0 and MODE 1 of 8254 Timer/Counter peripheral IC with the help of timing diagram. **(10)**

(B) Explain different modes of operation of 8257 DMA controller. **(10)**

Q.6 (A) Write a program for 8086 Microprocessor to multiply two 32-bit numbers (12345678 X 87654321). **(10)**

(B) Write a program for 8086 Microprocessor to find out smallest number in an array of 10 numbers. **(10)**

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