

TCS-405

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Even Semester Examination 2017-18

B.Tech. (SEMESTER-IV)

MICROPROCESSOR

Time: 03:00 Hours

Max Marks : 100

Note : Attempt all questions.

Q1. Answer any four questions.

(5*4=20)

- (a) Draw the block diagram of Computer.
- (b) Explain the function of each component: microprocessor, memory, I/O & Buses.
- (c) Write short note on (i) 80286 (ii) Pentium processor
- (d) Compare & contrast between 8086 & 8088 microprocessors.
- (e) Calculate the Physical Address of 8086 segmented memory if:
Segment Address: 1005H
Offset Address: 5555H
- (f) List the significant difference between microprocessor & microcontroller.

Q2. Answer any four questions :

(5*4=20)

- (a) Interface two 4K X 8 EPROMS and two 4K X 8 RAM with 8086?
- (b) Explain the Maximum Mode with Read/Write Cycle Timing Diagrams.
- (c) What is the difference between a NEAR & FAR procedure?
- (d) Explain the architecture of Numeric Processor 8087?
- (e) Explain the function of following signal in 8086 (i) ALE (ii) DT/R (iii) MN/MX.

- (f) What do you mean by addressing modes? What are the different addressing modes supported by 8086?

Q3. Attempt **any four** Questions: (5*4=20)

- (a) What is the difference between jump and loop instruction?
- (b) Explain the interfacing of Analog to Digital converter ADC0808/0809
- (c) Enlist the advantages of assembly language programming over machine language?
- (d) Explain the architecture of I/O Processor 8089?
- (e) How do you pass parameters to macro? What are the difference between a macro & subroutine?
- (f) Explain the internal architecture of 8255 PIO?

Q4. Answer **any two** questions: (10*2=20)

- (a) Describe the PCI Bus with the help of suitable block diagram? What is the speed of the PCI bus?
- (b) Write an assembly language program to find out the largest number from a given unordered array.
- (c) Explain :
- (i) Editor
 - (ii) Linker
 - (iii) Loader
 - (iv) Debugger

Q5. Answer **any two** questions: (10*2=20)

- (a) Explain different types of registers in 8086 microprocessor architecture with block diagram.

- (b) Draw & discuss the internal architecture of 8251 USART?
- (c) Write short notes on the following:
- (i) Bus
 - (ii) USB
 - (iii) Assembler directive
 - (iv) Interrupts
 - (v) RISC

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