TCS 405　　　　119　　　　Printed Pages : 2

Paper Code & Roll No. to be filled in your Answer Book

Roll No. ☐☐☐☐☐☐☐☐☐☐

**B.TECH**

**SEM IV (EVEN SEM) EXAMINATION 2014-15**

**MICROPROCESSORS**

*Time : 3 Hrs.*　　　　　　　　　　　　　　*Max. Marks :100*

Note: Attempt All Questions:

1. Attempt any four questions　　　　　　　(5*4=20)

a) Draw & discuss the internal block diagram 0f 8086.

b) How does an 8086 differentiate between an op code and instruction data?

c) Draw the register organization of 8086 and explain application of each register?

d) Explain the microprocessor evolution & types

e) Write a short note on (i) Pentium Processor (ii) Microcontroller

f) Differentiate between the following microprocessor:

(i) 80286　(ii) 80386　(iii) 80486

2. Answer any four questions　　　　　　　(5*4 =20)

a) Explain the Maximum Mode with Read Cycle Timing Diagrams.

b) Write an assembly language program to find out the largest number from a given unordered array.

c) Describe the different addressing modes in 8086.

d) What is the difference between a near & far procedure?

e) Explain the memory segmentation in 8086?

f) Differentiate between Immediate, Direct, and Register Addressing modes.

2 Attempt any two question (10*2=20)

a) Explain the General Bus Operation with Block Diagram.

b) Write a program to add a data byte located at an offset 0500H in 2000H segment to another data byte at 0600H in the 3000H segment. Store the result at 0700H in the 0700H segment.

c) Explain the 16 bit flag register in 8086.

Q4. Attempt any two Questions. (10*2=20)

a) Explain the Interfacing 8086 with internal architecture of 8255 PIO and Interfacing 8086 with internal block diagram of 8279.

b) Explain the Interfacing 8086 with internal block diagram of 8253 and Interfacing 8086 with internal architecture of 8251 USART.

c) How assemblers MACRO differ from procedure? Interface two 4k*8 EPROMS and two 4k*8 RAM Chips with 8086.

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

a) Explain the interfacing of A/D Converter & D/A Converters?

b) Explain the architecture of Numeric Processor 8087?

c) Explain the architecture of I/O Processor 8089?