**Enrollment No: _____ Exam Seat No:_____**

# C.U.SHAH UNIVERSITY

## Winter Examination-2019

**Subject Name : Advanced Micro-Processors**

**Subject Code : 4TE05AMP1 Branch: B.Tech (CE)**

**Semester : 5 Date : 25/11/2019 Time : 10:30 To 01:30 Marks : 70**

Instructions:

(1) Use of Programmable calculator & any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

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**Q-1** **Attempt the following questions:**

**a)** Define : Embedded system. **(01)**

**b)** Define : Assembler Directive. **(01)**

**c)** Define : Microcontroller. **(01)**

**d)** True/False: 8086 is 16 byte microprocessor. **(01)**

**e)** What is addressing mode? **(01)**

**f)** Which group of instructions does affect the flags? **(01)**
A). Arithmetic operations B). Logic operations
C). Data transfer operations D). Both A and B.

**g)** MVI A, 02 instructions is how many bits of instruction? **(01)**
A). 32 B).16 C). 8 D). 24

**h)** Intel 80386 microprocessor is a _____ processor. **(01)**
A). 4 bit B). 32 bit
C).8 bit D). 16 bit

**i)** What are software interrupts? **(01)**
A). RST 0 – 7 B). RST 5.5 - 7.5 C). INTR, TRAP

**j)** CMA is how many byte of instruction? **(01)**
A). 1 B). 2 C). 3 D). 4

**k)** The paging unit is enabled only in_____. **(01)**
A). Virtual mode B). addressing mode
C). Real mode D). Protected mode

**l)** The first processor with inbuilt floating point unit is_____. **(01)**
A). 80386 B). 80286 C). 8086 D). 80486

**m)** In which mode 80386 do support memory management and protection mechanism? **(01)**
A). Direct mode B). indirect mode C). Protected mode D). Real mode

**n)** The selector contain the segment's **(01)**
A). Segment limit B). Base address C). Access right byte D). All of the above

**Attempt any four questions from Q-2 to Q-8**

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|---|---|---|---|
| **Q-2** | | **Attempt all questions** | **(14)** |
| | **(a)** | Explain various addressing mode of 8086 MP. | |
| | **(b)** | Draw pin diagram of 8085 MP. Explain following pins 1.HOLD 2. RESET 3. ALE 4. IO/M , S1,S0 5.READY | |
| **Q-3** | | **Attempt all questions** | **(14)** |
| | **(a)** | Write short note on **1**. Address bus, data bus and control bus of 8085 MP. **2.** Different characteristics of Microprocessor. | |
| | **(b)** | Explain pin diagram of 8086 MP and explain all maximum mode pin. | |
| **Q-4** | | **Attempt all questions** | **(14)** |
| | **(a)** | Write short note memory protection mechanism in x86 families | |
| | **(b)** | Draw and Explain General Segment Descriptor format for x86 family MP. | |
| **Q-5** | | **Attempt all questions** | **(14)** |
| | **(a)** | What is descriptor table? Explain GDT, LDT, IDT. | |
| | **(b)** | Explain Real Address Mode and Protected Virtual Address Mode of 80386 MP | |
| **Q-6** | | **Attempt all questions** | |
| | **(a)** | Explain following instruction with example: MOV, XCHG, LOOP, LEA ,AAA, DAA, NEG. | **(07)** |
| | **(b)** | Explain different type of interrupt makeable, non-maskable, vector, non-vector with example. | **(05)** |
| | **(c)** | Write assembly language program to display more than 2 message using Macro. | **(02)** |
| **Q-7** | | **Attempt all questions** | |
| | **(a)** | Draw Register set of 80386 processor and explain flag register. | **(07)** |
| | **(b)** | Write assembly language program for transfer block of data from 20000h to 30000h memory location in reverse order. | **(05)** |
| | **(c)** | Differentiate between 16 bit and 32 bit Microprocessors. | **(02)** |
| **Q-8** | | **Attempt all questions** | |
| | **(a)** | Draw and Explain Memory bank system of 8086 MP. | **(05)** |
| | **(b)** | Draw and Explain block diagram of 8086 MP. | **(05)** |
| | **(c)** | Write short note on: List features of Core 2 Duo Processor and Pentium MMX processor. | **(04)** |