Paper / Subject Code: 38975 / Microprocessor

May 28, 2024   02:30 pm - 05:30 pm   1T01874 - S.E.(Computer Science & Engineering (Artificial Intelligence and Machine Learning)(R-2019-20)('C' Scheme) Semester - IV / 38975 - Microprocessor

QP CODE: 10055640

Duration: 3hrs   **Max Marks:80**

Q.1   (a)   Design 8086 microprocessor-based on following Specifications: 10
            1.   MP 8086 working at 10MHz minimum mode.
            2.   32 KB ROM using 8 KB Devices
            3.   16 KB RAM using 4KB chips

    (b)   Draw and explain Write operation and Read operation Timing diagram of   10
8086 Processor in Maximum mode.

Q.2   (a)   Explain the Initialization command words (ICWs) and Operational command   10
words(OCWs) of the 8259 PIC.

    (b)   Explain the interrupt structure of the 8086 processor(IVT) and differentiate
between Hardware and Software interrupts

Q.3   (a)   Comparison 80386 ,Pentium 1 ,Pentium 2 and Pentium 3 Processor   10

    (b)   Write an assembly language program for searching a Character in a Given   10
String.(Consider your own String) and Explain the following instructions:
XLAT, DAA,LAHF,AAA related to 8086.

Q.4   (a)   Draw and explain Pentium 4: Net burst microarchitecture.

    (b)   Explain MESI Protocol   10

Q.5   (a)   Draw and explain architecture of 8086.   10

    (b)   Differentiate between real Mode , Virtual Mode and Protected Mode of   10
80386 Processor .Explain the Floating point Pipeline of Pentium Processor

Q.6   (a)   Explain Modes of 8255 with a neat block diagram. Show the CWR   [10]
initialization.

    (b)   Write an ALP for 8086 to transfer the block of data.

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