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Total No. of Questions : 6]   [Total No. of Printed Pages : 4

EGS-216

B.E. 4th Sem. (CGPA) CSE (Zero Semester)
Examination - 2018

MICROPROCESSOR & MICROCONTROLLER

Paper–CS–403

Time : 3 Hours]   [Maximum Marks : 60

Note : Attempt all questions.

1. Write short answers :   5×2=10

    (i)   What is the function of PCHL and XTHL instructions in 8085 ?

    (ii) What is the function of $\overline{BHE}$ pin of 8086 ?

    (iii) What is the maximum size of virtual memory that can be accessed by 80286 in protected mode and what is max. size of physical memory ?

    (iv) Give the difference b/w IC 8253 and IC 8254.

    (v)   How many register banks are there in 8051 μc and how are they accessed ?

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2. (a) Write a program for 8085 µp to transfer a block of 10 databytes stored in memory locations starting at 5000H to 7000H. 5

(b) Compare different I/O addressing schemes. 5

or

(a) How many machine cycles are required to complete LDA 2000 H instruction execution ? Draw its timing diagram and explain. 5

(b) Discuss different hardware interrupts available in 8085. 5

3 (a) Write a program for 8086 to find out whether a given byte is in the string or not. If it is in the string, find out the relative address of the byte from the starting location of the string. 7

(b) Explain the stack structure of 8086. 3

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or

(a) Draw and discuss the architecture of 8086.   5

(b) Explain the function of the following signals of 8086 :   5

    (i) $\overline{\text{LOCK}}$ (ii) $\overline{\text{TEST}}$

    (iii) $\text{MN}/\overline{\text{MX}}$ (iv) NMI

    (v) INTR

4. Explain the following :   10

    (a) RISC and CISC Architecture

    (b) μP 80486 and μP 80386 features

    (c) Pentium architecture

5. (a) Draw the block diagram of IC 8255 and explain bidirectional mode of operation. 5

    (b) Name different registers available in IC 8257. What are their functions ?   5

or

(a) Explain how serial to parallel and parallel to serial conversion is achieved using IC 8251.   5

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(b) With the help of block and timing diagram. Explain hand shake mode of operation of IC 8155. 5

6. (a) Discuss interrupt architecture and related SFR's of µc 8051. 5

(b) Write down the function of the following pins of µc 8051 : 5

(i) $\overline{EA}$, $\overline{PSEN}$

(ii) TXD, RXD

(iii) T_0, T_1

(iv) XTAL1, XTAL2

(v) $\overline{WR}$, $\overline{RD}$

or

(a) Discuss internal RAM configuration of µc 8051. 5

(b) Write an ALP for µc 8051 to perform addition of eight (8) byte numbers. 5

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