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Roll No ....

CS - 601

B.E. VI Semester

Examination, June 2015

Micro Processor and Interfacing

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

UNIT-I

1. a) Define the significance of a system clock.

   b) Explain any two data transfer schemes.

   c) Explain the memory structure of 8-bit, 16-bit processors and 32-bit processors.

   d) Explain in detail the fetch, decode and execute cycle in the microprocessor.

OR

Write functioning of the following instructions of 8086 microprocessor:

(i) RIM (ii) SIM (iii) MOV A,M (iv) STA 2500H (v) LDA 2600H (vi) CMP

UNIT-II

2. a) Describe the difference between a jump and a call instruction.

   b) Name the different addressing modes of 8085 microprocessor.

   c) Write a program to generate a delay of 200 ms using an 8085 system that runs on 20 MHz frequency.

   d) Write a program based on 8085 instruction set to compute the average of 'n' number of bytes stored in memory.

OR

What is the role of stack in calling a subroutine and returning from the routine? Why stack is used in calling a macro if not explain?

UNIT-III

3. a) Why and when wait states are required?

   b) Explain the physical address formation in 80386.

   c) Bring out the architectural and signal difference between 8086 and 8088 microprocessor?

   d) How many segment registers are there in 8086? Explain the use of each register. What is queue? How queue is implemented in 8086.

OR

Draw and explain the internal structure diagram of 8086. How it is functionally divided internally? Also draw the FLAG register of 8086.

UNIT-IV

4. a) Explain BSR mode of operation of 8255.

   b) Explain physical address formation in real mode of 80386.

   c) Describe various modes of DMA transfer in brief.

   d) How do you interface 8259A with 8086 in maximum mode? Draw the schematic.

OR

What is the function of status word format of 8251 USART? Also explain the command word format of 8251.

UNIT-V

5. a) List various applications of 8051.

   b) Discuss the flags of 8051 microcontroller.

   c) Describe various addressing modes of 8051 in brief.

   d) With example, explain the arithmetic and branching instructions of 8051 microcontroller.

OR

Draw and discuss the formats and bit definitions of the following SFRs of 8051.

   i) PCON

   ii) TCON

   iii) SCON

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