SE / IT / SEM IV / CBCS   10 DEC 2018

(3 Hours)   [Total Marks: 80]

Note :   Q1 is compulsory.
          Attempt any THREE out of the remaining questions.
          Assume suitable data if necessary.

Q1. Attempt any 4 sub questions

a) Explain six stage instruction pipeline with suitable diagram.
b) Write a note on 8288 bus controller.   5
c) Explain memory hierarchy.   5
d) Draw the flowchart of unsigned binary restoring division algorithm.   5
e) Explain any five instructions of 8086 microprocessor with   5
   suitable examples.

Q2. a) What is DMA? Explain working of DMA.   10
     b) List and explain key characteristics of computer memory.   10

Q3 a) Draw the flowchart of Booths algorithm and multiply (-3)*(4)   10
       using Booths algorithm.
    b) Explain micro-programmed control unit with suitable diagram.   10

4   a) Explain addressing modes of 8086 microprocessor with suitable examples.   10
    b) Explain single and double precision IEEE 754 binary floating point 10
       representation formats.

Q5. a) Explain with suitable diagram maximum mode of operation of 8086   10
       Micro processor.
    b) Write 8086 Assembly Language Program to count number of 0's   10
       and 1's in a given 8 bit number.

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Q6   Write notes on (any two)
     a) Cache memory mapping techniques.
     b) Flynn's classification of parallel computers.
     c) Programmed I/O.

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