5th Semester Back Examination 2017-18
Microprocessors
BRANCH: AEIE, AERO, AUTO, BIOMED, ECE, EIE, ETC, FASHION, FAT, MECH, METTA, MME
Time: 3 Hours
Max Marks: 70
Q.CODE: B235
Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1   **Answer the following questions :**   **(2 x 10)**
- **a)** What is the purpose of data segment register in 8086?
- **b)** What is the difference between a microcontroller and microprocessor?
- **c)** Write a program for producing a short delay using one register.
- **d)** How many address lines are available in 8086 microprocessor and what is its maximum memory capacity?
- **e)** Differentiate nearjump from far jump in 8086.
- **f)** Define Macros in 8086.
- **g)** Assume that the control register of 8255 PPI is 81H. What are the hardware configuration of 8255 PPI ports?
- **h)** What are the control signals used for DMA operation?
- **i)** The internal RAM memory of the 8051 is:
  - i. 32 bytes
  - ii. 64 bytes
  - iii. 128 bytes
  - iv. 256 bytes
- **j)** If CS content is 3000H and IP content is 0500H. Find the physical address.

Q2   **a)** What are addressing modes in 8086? Discuss each with example.   **(5)**
     b) What is pipelining. Explain the term with respect to IC8086.   **(5)**

Q3   **a)** Compare RISC and CISC   **(5)**
     b) List the procedure to set a TRAP flag of IC8086.   **(5)**

Q4   **a)** What are the advantages and disadvantages of memory mapped I/O over I/O-mapped I/O?   **(5)**
     b) Compare microprocessors and microcontrollers   **(5)**

Q5   **a)** Explain when we can use the following instructions   **(5)**
       DAA
       ADC
     b) Draw the interfacing diagram of DAC0808 with 8051   **(5)**

Q6   **a)** Draw Timing Diagram for minimum mode 8086 read bus cycle.   **(5)**
     b) Multiply 12H and (-13H). Store the result in 30000H [3000:0000] and 30001H locations.   **(5)**

Q7   Describe with block diagram interfacing of DAC with 8086?   **(10)**

Q8   **Write short answer on any TWO :**   **(5 x 2)**
- **a)** Serial communication of 8051
- **b)** Watch dog timer of PIC
- **c)** Timer modes of operation.
- **d)** IVT in 8086 microprocessor