Code: 13A04507 **R13**

B.Tech III Year I Semester (R13) Regular Examinations December 2015

MICROPROCESSORS & INTERFACING

(Common to CSE and IT)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) Explain DAA and XCHG instruction of 8085.

(b) Describe function of AEN and DT/$\overline{R}$ signal of 8086.

(c) What is effective address? How it can be specified in instruction?

(d) What is the difference between arithmetic and logical shift?

(e) How to enable and disable interrupts in 8086?

(f) Compare memory mapped I/O with I/O mapped I/O.

(g) What is the function of In Service Register of 8086?

(h) Write control word to set bit 4 of port C of 8255.

(i) State extra hardware features of 8051 as compared to microprocessor.

(j) Explain TCON and TMOD function registers of 8051.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 Draw and explain architecture of 8085.

OR

3 Explain with neat diagram how 8086 access a byte or word from even & odd memory banks.

UNIT – II

4 Describe addressing modes of 8086 with suitable examples.

OR

5 Describe following instructions of 8086 with example:
(i) STOS. (ii) TEST. (iii) ROL. (iv) CMC.

UNIT – III

6 Draw and explain interrupt vector table of 8086.

OR

7 Interface 16-bit output port to 8086. The output port should be mapped in memory with address 40000H.

UNIT – IV

8 Explain mode 0. Mode 1 and mode 2 of 8253 timer with neat timing diagrams.

OR

9 Describe sequence of operations during data transfer between CPU and memory using 8237 DMA controller.

UNIT – V

10 Draw and explain internal structure of port 1 of 8051.

OR

11 Explain bit level instructions of 8051 microcontroller with appropriate examples.

*****