

B.Tech III Year I Semester (R13) Regular & Supplementary Examinations November/December 2016
MICROPROCESSORS & INTERFACING
 (Common to CSE & IT)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- Explain the function of Auxiliary carry flag and Sign flag of 8085.
 - Describe function of ALE signal of 8085.
 - Identify the addressing mode of following instructions:
 (i) MOV [BX +2400], AL (ii) MOV CX, [BX+SI+ 2500]
 - Explain the use of PUSH & POP instructions of 8086
 - How to enable and disable interrupts in 8086?
 - Explain how BIOS routines can be called with INT instruction.
 - Compare synchronous and asynchronous data transfer.
 - Write control word format of 8255.
 - Explain any one power saving options supported by 8051.
 - How are the bits of registers PSW affected if we select Bank 2 of 8051?

PART – B

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

UNIT – I

- 2 Draw and explain Architecture of 8085.

OR

- 3 Describe functions of following signals of 8086 microprocessor:
 (a) RESET. (b) BHE. (c) DT/R. (d) TEST.

UNIT – II

- 4 Describe addressing modes of 8086 with suitable examples.

OR

- 5 Describe following instructions of 8086 with examples:
 (a) DEC. (b) CBW. (c) DAA. (d) LOOP.

UNIT – III

- 6 What is the difference between DOS calls and Bios calls? Illustrate with suitable examples.

OR

- 7 Interface 8K word of EPROM (2764) as well as RAM (6264) to 8086 using 3:8 decoder (74138). Select EPROM address as FC00H and RAM address 1C00H.

UNIT – IV

- 8 What is DMA? How 8237 handles data transfer in DMA operation?

OR

- 9 Draw and explain the functional block diagram of 8253 timer. Write control word format for 8253.

UNIT – V

- 10 Explain memory organization of 8051 microcontroller in detail.

OR

- 11 What are SFRs in 8051 microcontroller? Explain TCON and TMOD registers.
