

6E3086**6E3086****B. Tech. VI Semester (Main/Back) Exam. May/June, 2013****ELECTRONICS & COMMUNICATION ENGINEERING # 6EC2****MICROPROCESSOR AND MICROCONTROLLER****Time : 3 Hours****Min. Passing Marks : 24****Maximum Marks : 80****Instruction to Candidates :**

Attempt any **five** questions, selecting **one** question from **each** unit. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.)

Unit-'I'

of 8085 and explain them. [8]

1. Explain the details of CPU and functioning of data bus, address bus and control bus. [16]

OR

3. (a) Explain the role and purpose of program counter and instruction register. [8]

- (b) What are subroutines? How they are useful? [8]

1. Explain the followings :

- (i) Encoder
(ii) Buffer
(iii) Latch
(iv) I/P and O/P devices [4×4 = 16]

Unit-'II'

2. Draw the pin diagram (40 pins) of 8085 microprocessor and explain the significance of every pin in detail. [16]

OR

2. (a) What is meant by a register? Explain its merits/demerits over a memory location. [8]
(b) Discuss in details the various interrupts available in 8085 microprocessor. [8]

Unit-'III'

3. (a) Explain the working of RST instructions and their use. [8]
(b) List the conditional call and return instructions

Unit-'IV'

4. Draw the pin diagram of programmable peripheral interface chip (8255) and explain its various operational modes. [16]

OR

4. Draw the pin diagram of programmable interrupt controller (8259) and also explain the various registers used in it. [16]

Unit-'V'

5. What is a microcontroller? What are its typical applications? Also, explain the salient features of 8051, microcontroller along with its pin diagram. [16]

OR

5. Explain in detail the various addressing modes and instructions available in 8051; microcontroller.

[16]