

6E3086

Roll No. _____

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B.Tech VI Sem. (Main & Back) Exam., May/June 2013

Electronics & Communication

6EC2 Microprocessor and Microcontroller

Time: 3 Hours

Maximum Marks: 80

Min. Passing Marks: 24

Instructions 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.

Use of following supporting material is permitted during examination.

(Mentioned in form No. 205)

1. _____

2. _____

UNIT - I

Q1. Explain the details of CPU and functioning of data bus, address bus and control bus. [16]

OR

Q1. Explain the followings: -

(i) Encoder

(ii) Buffer

(iii) Latch

(iv) I/P and O/P devices

[4x4=16]

UNIT - II

- Q2. Draw the pin diagram (40 pins) of 8085 microprocessor and explain the significance of every pin in detail. [16]

OR

- Q2. (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

- Q3. (a) Explain the working of RST instructions and their use. [8]
(b) List the conditional call and return instructions of 8085 and explain them. [8]

OR

- Q3. (a) Explain the role and purpose of program counter and instruction register. [8]
(b) What are subroutines? How they are useful? [8]

UNIT - IV

- Q4. Draw the pin diagram of programmable peripheral interface chip (8255) and explain its various operational modes. [16]

OR

- Q4. Draw the pin diagram of programmable interrupt controller (8259) and also explain the various registers used in it. [16]

UNIT - V

- Q5. What is a microcontroller? What are its typical applications? Also, explain the salient features of 8051, microcontroller along with its pin diagram. [16]

OR

- Q5. Explain in detail the various addressing modes and instructions available in 8051; microcontroller. [16]