

5E5042

Roll No. _____

Total No of Pages: **3**

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B. Tech V Sem. (Main/Back) Exam. Nov-Dec. 2015

Electrical Engineering

5EE2A Microprocessor & Computer Architecture

Time: 3 Hours

Maximum Marks: 80

Min. Passing Marks Main: 26

Min. Passing Marks Back: 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.

1. NIL

2. NIL

UNIT-I

- Q.1 (a) Name the various types of buses in 8085 microprocessor. Explain the function of each in brief. [4+4=8]
(b) Draw pin diagram of 8085 microprocessor and explain its various pins. [4+4=8]

OR

- Q.1 (a) What is program status word in 8085? Explain in detail. [4+4=8]
(b) What are various interrupts available with 8085? Distinguish between markable and nonmarkable interrupts. [4+4=8]

UNIT-II

- Q.2 (a) Explain the following instructions using suitable examples - [2×4=8]
(i) XCHG
(ii) DAD
(iii) DAA
(iv) LHLD
(b) Explain various addressing modes of 8085 using suitable examples. [8]

OR

- Q.2 (a) Write an assembly language program to add two 16 bit numbers 22A3H and 1060H using ADC instruction. Store the result in memory. [12]
(b) Name the various machine cycles of 8085. [4]

UNIT-III

- Q.3 (a) Explain 8259 chip with the help of block diagram. [8]
(b) Name various modes of operation in 8253. [8]

OR

- Q.3 (a) Explain interfacing of 8257 with 8085 using block diagram. [8]
(b) Define working of A/D converter with the help of diagram. [8]

UNIT-IV

- Q.4 (a) Draw architecture of 8086. Explain the function of various registers. [4+4=8]
(b) Differentiate between 8085 and 8086. [8]

OR

- Q.4 (a) What are various addressing modes of 8086? [8]
(b) What do the following instructions do? Explain using suitable examples. [2×4=8]
(i) DIV
(ii) JG
(iii) NEG
(iv) MUL

UNIT-V

- Q.5 (a) Define memory and its various types in detail. [8]
(b) What do you understand by terms memory latency, memory seektime and memory bandwidth? [8]

OR

- Q.5 (a) Differentiate between: [4+4=8]
(i) Flash and Cache memory.
(ii) Static and Dynamic memory.
(b) Define PAL and PLA using suitable diagram. [4+4=8]
