

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2054

Roll No.

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B. Tech.

(SEM. IV) THEORY EXAMINATION 2010-11
MICROPROCESSORS

Time : 3 Hours

Total Marks : 100

- Note :—** (1) Attempt ALL questions.
(2) All questions carry equal marks.

1. Attempt four parts of the following :— (5×4=20)

- (a) Explain the Architecture of 8086. Also mention its features.
- (b) Explain the following :—
(i) MEMORY SEGMENTATION
(ii) REGISTER ORGANIZATION
Also mention its importances.
- (c) Discuss the Bus Interface unit and Execution unit of 8086 μ p.
- (d) What are the Timing and control instruction set of 8085 μ p ? Also mention its importances.
- (e) Explain the Architecture of 8085 μ p. Also mention its utilities.

(f) Explain the following :—

(i) ALU of 8085 μp

(ii) Bus organization of 8085 μp .

2. Attempt two parts of the following :— (10 \times 2=20)

(a) Explain the following addressing modes of 8086 μp :

(i) DIRECT ADDRESSING

(ii) RELATIVE BASED INDEXED ADDRESSING

(iii) REGISTER IN DIRECT ADDRESSING

(iv) IMMEDIATE ADDRESSING.

(b) Explain the following instructions sets of 8086 μp with suitable examples .

(i) ARITHMETIC INSTRUCTIONS

(ii) DATA TRANSFER INSTRUCTIONS

(iii) LOGIC INSTRUCTIONS

(iv) FLAG CONTROL INSTRUCTIONS.

(c) What do you mean by 'ALP' ? Discuss the low level and high level ALP. Also discuss the advantages and disadvantages of low level ALP over high level ALP.

3. Attempt two parts of the following :— (10 \times 2=20)

(a) Draw and explain the pin configuration of 8088 processor. Also mention the importances of 8088 processors pin configurations.

(b) Draw and explain the pin configuration of 8086 μp . Also mention the significances of 8086 μp pin configurations.

- (c) Explain the following :—
- (i) Buffering Memory Organization
 - (ii) Demultiplexing
 - (iii) Clock generators
 - (iv) Min./Maximum Mode operation.
4. Attempt two parts of the following :— (10×2=20)
- (a) What do you understand by “Peripheral Interfacing devices” of microprocessors (μp) ? Also mention its significances and limitations (any **THREE**).
 - (b) Draw and explain the pin configuration of 8253 peripheral interfacing devices of 8085 μp . Also mention its limitations and applications.
 - (c) Draw and explain the pin configuration of 8254 peripheral interfacing device of 8085 μp . Also mention its limitations and applications.
5. Attempt two parts of the following :— (10×2=20)
- (a) Draw and explain the pin configuration of 8259-programmable interrupt controller of 8085 μp . Also mention its utilities.
 - (b) Draw and explain the pin configuration of 8237 DMA controller of 8085 μp . Also mention its significances.
 - (c) Write short notes on the following :—
 - (i) 32-bit μp
 - (ii) 16-bit μp .