

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

Paper ID : 2289460

Roll No.

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B.TECH

**Regular Theory Examination (Odd Sem - V) , 2016 - 17
MICROPROCESSOR**

Time : 3 Hours

Max. Marks : 100

SECTION - A

1. Attempt all parts. All parts carry equal marks. Write answer of each part in short questions. (10×2=20)
- a) Give the significance of SIM and RIM instructions available in 8085?
 - b) How does CPU identify between 8-bit and 16-bit operations?
 - c) Why multiplexing is done in 8085 microprocessor?
 - d) How clock signals are generated in 8086? What is the maximum internal clock frequency?
 - e) How the 20 bit effective address is calculated in 8086? Microprocessor?
 - f) State the significance of LOCK signal in 8086

- g) Give any four miscellaneous instructions in 16-bit instruction?
- h) How many modes are present in 8255 PPI?
- i) Name the output modes used in 8279
- j) Differentiate between half duplex and full Duplex transmission.

SECTION - B

Note: Attempt any five Parts from this section (5×10=50)

2. a) Draw and explain the timing diagram of read cycle in 8085?
- b) Sketch the Architecture of 8086 microprocessor?
- c) List out the maskable and non-maskable interrupt available in 8085?
- d) Write a 8086 Assembly language program to convert an 8 bit binary number into equivalent ASCII code.
- e) Explain the following assembler directives.
- i) ASSUME
 - ii) EQU
 - iii) DD
 - iv) DW

- f) Illustrate the concept of segmented memory? What are its advantages?
- g) Describe the process of the Direct Memory Access (DMA) and the functions of various elements of the 8237.
- h) Cite the concept of interrupt and polling.

SECTION - C

Note: Attempt any two Questions from this section.

(2×15=30)

- 3.
 - a) With neat block diagram explain the architecture of 8085?
 - b) Describe the maximum mode signals, bus cycle and maximum mode system configuration of 8086.
- 4.
 - a) Write a program based on 8086 instruction set to compute the addition of 16 bytes stored in memory.
 - b) Draw the stepper motor interfacing with 8086 and explain its operations.
- 5.
 - a) Explain the block diagram of the 8279 Key board/ Display interface and its operations.
 - b) Draw the block diagram of programmable interrupt controller and explain its operation.

