Printed Pages: 3

NEC -503

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

Paper ID : 2289460

Roll No.

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.