BTS-IV-04.19-0648

Reg. No. | | | | | | | | |

C

B.Tech. Degree IV Semester Examination April 2019

CS 15-1402 MICROPROCESSORS

(*2015 Scheme*)

Time: 3 Hours

Maximum Marks: 60

PART A

(Answer *ALL* questions)

(10 × 2 = 20)

I. (a) What is the use of ALE and HOLD pin of 8085 microprocessor

(b) How information is saved on the stack of 8085?

(c) Write any four 8085 instruction that can be used to clear accumulator?

(d) Assume that before the execution of any instruction we have [A]= 65H, [B]= B2H, [H]=F9H, [L]=50H, CF=1, and content of memory location F950H is 38H, What is the value of A register and value of different flags after the execution of each of the following.

(i) RAL (ii) CMA (iii) CPI 55H (iv) CMC

(e) Distinguish between the following pairs of instructions

(i) XRA M and ORA M (ii) STA and STAX

(f) Explain with example, how physical address is formed in 8086 microprocessor?

(g) Explain intersegment and intrasegment branching in 8086 microprocessor?

(h) What is LOCK prefix? Explain its use?

(i) List down the features of Programmable Interval Timer 8253

(j) What is meant by Two key-lock out and N-key roll over mode in 8279?

PART B

(4 × 10 = 40)

II. With a neat diagram explain the architecture of 8085 microprocessor along with function of each block and register. (10)

OR

III. What is the signal classification of 8085 pin diagram. Briefly explain the pin functions (10)

IV. (a) With a neat diagram explain how the address and data lines are demultiplex in 8085 microprocessor. (6)

(b) Describe the different interrupts present in 8085 microprocessor? (4)

OR

V. (a) Draw and explain the timing diagram of SHLD 6050H (7)

(b) Define machine cycle and T state? What are the different machine cycle in 8085 microprocessor? (3)

(P.T.O.)

VI. (a) What are minimum mode and maximum mode configuration? State the importance of maximum mode configuration. (7)

(b) State the advantage of instruction queue in 8086 microprocessor (3)

OR

VII. What do you mean by addressing mode? Discuss in detail the various addressing modes of the 8086 microprocessor with examples? (10)

VIII. (a) Explain the modes of operation supported by the programmable peripheral interface 8255. (4)

(b) Draw the architecture of the 8259 and explain the facilities available? (6)

OR

IX. (a) Explain the different sections of 8279 Keyboard display interface (4)

(b) Explain the working of the following pins of 8257 DMA controller (6)

(i) MARK (ii) TC (iii) ADSTB (iv) AEN (v) HRQ (vi) HLDA

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