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End Semester Examination of Semester–III, 2015

Subject : BCA

Paper : 2112 (Microprocessor)

Full Marks : 70

Time : 3 Hrs

*The figures in the margin indicate the marks
corresponding to the question*

*Candidates are requested to give their answers
in their own word as far as practicable.*

Illustrate the answers wherever necessary.

Group A

1. Answer any five questions : 5×2=10
- i) What is TRAP?
 - ii) What do you mean by microprocessor?
 - iii) Give the format of control word of 8255 PPI (Programmable Peripheral Interface).
 - iv) What are the functions of HOLD and HLDA pins of 8085 microprocessor?
 - v) Assume that a 64 byte RAM, starting address is F200H, find the last address?
 - vi) Write-down the functions of 8259A?
 - vii) What is handskake signal?
 - viii) What are the differences between NOP and HLT?

(2)

Group B

- Answer **any five** questions : 5×4=20
2. Differentiate between LOCK and $\overline{\text{LOCK}}$? 4
 3. What is vector interrupt? Give the example? 2+2
 4. What is timing diagram? What do you mean by T State? 2+2
 5. What is ALE? Using a neat diagram explain how AD₇-AD₀ is de-multiplexed? 1+3
 6. What are the different modes of operations used by 8255 PPI? 4
 7. What is Instruction format? What do you mean by two byte instruction? Give example. 1+3
 8. Differentiate Memory-mapped I/O with Peripheral mapped I/O? 4

Group C

- Answer **any four** questions : 4×10=40
9. i) Draw the basic block diagram of 8085 microprocessor?
ii) What are the various status flags in 8085 microprocessor? Discuss their role? 5+5
 10. i) What do you mean by subroutine? How CALL and RET instruction are used to handle the subroutine execution?
ii) Draw the timing diagram of LXI H, C400H? 5+5

(3)

11. i) Explain how the 8237 DMA controller transfer 64K bytes of data per channel with eight address line?
ii) Draw the block diagram of 8085 microprocessor?
5+5
12. What is Status Register? Write the functions of different Status Registers available in 8085 μ p? What are the difference between conditional and unconditional Jump?
2+5+3=10
13. Write the functions of following instructions: 5x2=10
CLC, RAL, DAD, XRA, CPI
14. Write a routine to delay the 8085 microprocessor. Also count the total delay using the Clock frequency of 3 MHz.
5+5
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