

Code No: 811AB**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA I Semester Examinations, April/May - 2019****COMPUTER ORGANIZATION****Time: 3 Hours****Max. Marks: 60****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 8 marks and may have a, b, c as sub questions.

PART - A**5 × 4 Marks = 20**

- 1.a) What is the purpose of Half adder? [4]
- b) Draw the block diagram of typical RAM chip. [4]
- c) What are the flags in 8086? [4]
- d) Compare isolated versus memory mapped I/O. [4]
- e) What are the advantages of parallel processing? [4]

PART - B**5 × 8 Marks = 40**

2. Simplify the following booleam function using four-variable maps.
a) $F(A, B, C, D) = \sum(3, 7, 11, 13, 14, 15)$
b) $F(A, B, C, D) = \sum(0, 2, 4, 5, 6, 7, 8, 10, 13, 15)$ [4+4]
OR
- 3.a) Explain the floating point representation.
b) Explain operation of 3 to 8 decoder. [4+4]
4. Explain the operation of set-associating mapping. [8]
OR
5. Explain about content addressable memory. [8]
6. Explain 8086 CPU architecture. [8]
OR
- 7.a) Write an 8086 assembly level languages program to find biggest among 3-integers.
b) Give some 8086 shift instructions. [4+4]
8. Explain DMA-mode of data transfer. [8]
OR
- 9.a) Explain about Daisy chaining with neat sketch.
b) What are the various peripheral devices? [4+4]
10. Explain the RISC pipeline. [8]
OR
11. Explain the SIMD array processor. [8]