

[15104]

**M.C.A. DEGREE EXAMINATIONS**  
**FIRST SEMESTER**  
**Paper - IV : COMPUTER ORGANIZATION**  
*(2016-17, 2017-18, 2018-19 & 2019-20 Admitted Batches)*

**Time : 3 Hours**

**Maximum : 75 Marks**

**SECTION - A**

**Answer ALL Questions.**

**(4×15=60)**

1. a) With a neat sketch explain about the 4×1 and 8×1 multiplexers. **(15)**  

**(OR)**

b) Explain about the Shift registers and Counter with a diagram and truth table. **(15)**
2. a) Explain about the Floating Point representation with an example of 10.4123 and 23.3434. **(15)**  

**(OR)**

b) Explain about the 8085 internal architecture with neat diagram. **(15)**
3. a) Explain about the memory reference and I/O reference instructions with an example. **(15)**  

**(OR)**

b) Discuss about the different types of instruction formats with an example. **(15)**
4. a) Explain about the Auxiliary Memory with a neat diagram. **(15)**  

**(OR)**

b) Describe about the DMA transfer with neat sketch. **(15)**

## SECTION - B

**Answer any FIVE of the Following.**

**(5×3=15)**

- 5.
- a) Explain about the Ex-or and Ex-Nor gates with truth table.
  - b) Explain about Boolean theorems.
  - c) What is a signed data representation?
  - d) Explain about the timing and control circuit.
  - e) Explain about Interrupt Vector?
  - f) What is register stack and memory stacks?
  - g) Compare Asynchronous and Synchronous data transfer.
  - h) What is Paging?
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