

Roll No. 

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**Total No. of Pages: 02**  
**Total No. of Questions: 09**

**MCA (Sem.-1<sup>st</sup>)**  
**COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE**

**Subject Code: MCA-103**

**Paper ID: [B0130]**

**Time: 3 Hrs.**

**Max. Marks: 100**

**INSTRUCTIONS TO CANDIDATE:**

- 1. Section A, B, C and D contains Two questions each carrying TWENTY Marks.**  
**Students are required to attempt any one question from each Section.**
- 2. Section E is compulsory carrying TWENTY marks.**

**SECTION-A**

1. Discuss the major addressing modes of the computer with example. 20
2. Explain each component in the block diagram of a digital computer. 20

**SECTION-B**

3. Differentiate between :
  - a) Interrupt initiated I/O and DMA transfer
  - b) Synchronous and asynchronous data transfer 20
4. Explain the concept of polling and daisy chain methods. 20

**N-C**

5. Discuss various page replacement algorithms of cache memory. 20
6. Write a Short Note on:
  - a) Cache Coherence
  - b) Associative Memory 20

**SECTION-D**

7. Explain cross bar switch and multistage switching network. 20
8. Write Assembly Language program for
  - a) Subtracting two numbers
  - b) Sorting a list 20

### **SECTION-E (Compulsory)**

- |    |    |  |   |
|----|----|--|---|
| 9. | a) | Highlight major difference between RISC & CISC.                      | 2 |
|    | b) | Define Direct Memory Access.   | 2 |
|    | c) | How trap and interrupt are different?                                | 2 |
|    | d) | Define handshaking.  | 2 |
|    | e) | What is the significance of virtual memory?                          | 2 |
|    | f) | What is the difference between computer organization & architecture? | 2 |
|    | g) | Give the importance of cache memory.                                 | 2 |
|    | h) | List two methods of data transfer.                                   | 2 |
|    | i) | List major characteristics of multiprocessor.                        | 2 |
|    | j) | List major register of 8085 microprocessor.                          | 2 |

**---:END:---**