

Roll No.

Subject Code—2051

PGDCA EXAMINATION

(Second Semester)

**COMPUTER ORGANIZATION AND
ARCHITECTURE**

MS-07

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. Explain the different types of register used in a basic computer. Explain, how these register are connect to common bus ? 20
2. Explain the fetch and decode phase of instruction cyclic with the sequence of micro-operations and their appropriate diagram. 20

3. Design a micro programmed control unit along with micro programmed sequencer. 20
4. Explain the Input-Output Processor. And how Input-Output Processor communicate with CPU. 20
5. (a) Discuss different mapping techniques in cache memory system. 10
(b) Explain the concept of virtual memory system for execution of program. 10
6. What is stack organization ? Explain the functioning of register stack and memory stack with suitable example. 20
7. What is a DMA scheme of data transfer ? Discuss its operating principle. What is a burst mode of data transfer and cyclic stealing mode of data transfer ? 20
8. Write short notes on the following :
 - (a) Transaction Processing benchmarks
 - (b) RISC characteristics
 - (c) Superscalar Processor
 - (d) Interrupt driven I/O. 20