Time: Three Hours   [Maximum Marks: 50]

Note : Answer all questions. All question carry equal marks.

Unit-I

Q. 1. Explain the following:

   a. Gray code

   b. Execess-3 code

Or

Explain the following:

   a. De-Morgan's theorem

   b. K-map

Unit-II

Q. 2. Explain BCD adder in detail.

Or

What do you mean by flip-Hop?

Unit-III

Q. 3. Explain the following:

   a. RTL

   b. Edge higgered flip-flop.

Or

   Explain CMOS integrated circuit.

Unit-IV

Q. 4. Explain direct memory access in detail.

Or

Define addressing mode. Explain various types of addressing modes.

Unit-V

Q. 5. Explain cache memory in detail.

Or

What is virtual memory? Explain in detail.