



UTTARAKHAND OPEN UNIVERSITY, HALDWANI (NAINITAL)
उत्तराखण्ड मुक्त विश्वविद्यालय, हल्द्वानी (नैनीताल)

MCA-16/MCA-17
1ST YEAR 1ST SEMESTER ASSIGNMENT

Session - 2017-18, Summer Last Date of Submission: 31st October 2017

Session - 2017-18, Winter Last Date of Submission: 30th April 2018

Course Title: Digital Logic

Course Code: MCA-02

Maximum Marks: 30/20

Section 'A' contains 08 short answer type questions of 4/2.5 marks each. Learners are required to answers 4 questions only. Answers of short answer-type questions must be restricted to 250 words approximately.

1. What is difference between latch and flip-flop?
2. Write a short note on the following-
 - (i) ASCII Code
 - (ii) BCD
3. Write a short note on:
 - (i) Excess 3
 - (ii) Gray Code
4. What is a flip-flop? List out the application of flip-flop.
5. What is a demultiplexer? Discuss the differences between a demultiplexer and a decoder.
6. Differentiate SRAM and DRAM
7. What is logic gate? Explain the various types of logic gate with truth table.
8. Convert binary $(100101)_2$ to its decimal equivalent.

Section 'B' contains 04 long answer-type questions of 7/5 marks each. Learners are required to answers 02 questions only.

1. Explain the De-Morgan's theorems using algebraically and truth table.
2. Distinguish between minterms and maxterms with suitable example.

3. What is a half-adder? Explain a half-adder with the help of truth-table and logic diagram.
4. What do you mean by multiplexer? Explain the working of a 8-to-1 multiplexer with diagram.

