Assignment:- 1 17 March 2020

LINEAR AND DIGITAL INTEGRATED CIRCUITS

Instructions:-

1. Last date of Submission **22nd March 2020 (SUNDAY).**
2. All problems are compulsory.
3. Write your name and class roll number on the top of every page containing solution.
4. Only soft copy in a single PDF format is to be uploaded on whatsapp group.

Maximum Marks:- 10

Q1. Number system and codes:- 2M

(a) $9F2_{16} = ?_2 = ?_{10}$
(b) $0110100000111001_2 = ?_{BCD}$
(c) Solve using 2's compliment method
    1. Add 59_{10} and 38_{10}
    2. Subtract 39_{10} from -59_{10}

Q2. Solve the given expression using K-map and draw the equivalent NAND – NAND circuit diagram. $Y(A,B,C,D) = \sum (1,5,6,7,11,12,13,15)$ 2M

Q3. Construct a 4-bit binary adder subtractor and explain its working. 1M

Q4. Construct a MOD – 10 counter and explain its working 1M

Q5. Draw the circuit diagram and explain the working of a JK flip flop with asynchronous inputs to the flip flops? 2M

Q6. Draw the circuit for D/A convertor and explain its working. 2M