S.B. Roll No..

DIGITAL ELECTRONICS
3rd Exam/ECE/CSE/IT/0195/Jan'2022
(FOR 2018 BATCH ONWARDS)

Duration: 1.15Hrs.   **M.Marks:25**

SECTION-A

Q1. Attempt any three questions.   **3x5=15**

    a.   Define shift register and explain its types.
    b.   What is BCD code? What are its advantages and disadvantages?
    c.   Explain and design full subtractor circuit.
    d.   Give some application of Multiplexer.
    e.   Give the truth table for each flip flop types: - JK, D and T.
    f.   What do you mean by ripple counter?
    g.   Draw the symbol, Boolean expression and truth table for EX-NOR gate.

SECTION-B

Q2. Attempt any one question.   **1x10=10**

    i.   Draw a K-map to reduce the function. Realize the reduced function by using NAND gates only.
           $Y = \sum m\ (0,1,2,3,5,7,8,9,10,11,13,15)$.
    ii.   What is difference between asynchronous and synchronous counter.
    iii.   What are D/A converter? Write the specifications of D/A converter.
    iv.   What do you mean by TRI STATE buffer register? Explain the block diagram of TRI STATE buffer register