# SRINIX COLLEGE OF ENGINEERING

1$^{ST}$ INTERNAL EXAMINATION-2021-22

Subject-**DLD**                     Semester-**3rd**                     Branch-**CSE)**

Full Mark-**60**                                                                     Time-**2.00Hrs**

**ANSWER ALL QUESTIONS (PART-A)**                                    **[2X10=20]**

1. Convert$(25.81)_{10} = (?)_2$.
2. Find the radix of$(\frac{42}{5})_r = (10)_r$.
3. Find the 2's complement of (i) 1101010  (ii) 0001010
4. Find $(1001101)_G$  to its binary format.
5. Write about XOR and NOR gate.
6. Write the absorption law and prove it?
7. Given $y = \sum m(0,1,3,5,7)$.Write its SOP forms?
8. Differentiate between combinational and sequential circuit.
9. Explain about 2x1 MUX.
10. Differentiate between synchronous and asynchronous counter.

**ANSWER ALL QUESTIONS (PART-B)**                                    **[5X4=20]**

1. Given $y = A\bar{B} + C$.Implement using (i) Basic gates  (ii) NAND gates

2. A 7 bit Hamming code is $(1100110)_2$ Find the error bit and correct it.

3. Given $y = \sum m(0,1,3,6,10,11,14)$ Implement using (i) 4x1 MUX  (ii) 8x1 MUX

4. Write the Demorgan's theorem and prove it ?

**ANSWER ANY TWO QUESTION    (PART-C)**                              **[10x2=20]**

1. Explain about ripple counter.
2. Convert SR to JK flip-flop.
3. Explain SISO?