School of Electrical Electronics and Communication Engineering

Electrical Engineering
CAT1 - Apr 2022

Time : 90 Minutes **Marks : 30**

Sem II - BEE01T1005 - Introduction to Digital Systems
Your answer should be specific to the question asked
Draw neat labeled diagrams wherever necessary

1.	Represent the decimal number 345 in i) BCD ii) Excess-3	CO1	(2)
2.	State and Explain the DeMorgan's Theorem	CO1	(2)
3.	Multiply these numbers in the given base without converting to decimal. a) $(135)_6$ and $(43)_6$ b) $(121)_3$ and $(12121)_3$	CO1	(5)
4.	Define Associative Law and Distributive law for Boolean expression.	CO1	(5)
5.	Convert the following numbers 1. (163.789)10 to Octal number AND Hexadecimal number 2. (11001101.0101)2 to base-8 and base-4	CO1	(8)
6.	Prove that: 1. AB + B'C + AC = AB + B'C 2. (AB + C + D)(C' + D)(C' + D + E)=ABC'+D 3. (A + B)'(A' + B')'= 0	CO1	(8)