

School of Electrical Electronics and Communication Engineering

Electrical Engineering

CAT2 - Jun 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

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|----|---|-----|-----|
| 1. | Define Pair, Quad, and Octet | CO2 | (2) |
| 2. | Define combinational logic circuit. | CO2 | (2) |
| 3. | Obtain the standard form of a) SOP b) POS expression for the function given below
$F(A,B,C) = \Sigma m(0,1,2,5,7)$ | CO2 | (5) |
| 4. | Explain about 1-bit Magnitude Comparator | CO2 | (5) |
| 5. | Simplify the Boolean expressions to minimum number of literals
<ul style="list-style-type: none">• $(A + B)(A + C')(B' + C')$• $AB + (AC)' + AB'C (AB + C)$• $(A+B)' (A'+B)'$ | CO2 | (8) |
| 6. | What is Multiplexer? Design and explain the circuit diagram of 4 X 1 Multiplexer. | CO2 | (8) |