Quiz on DLD

Dated on: 10.11.2020

Time: 20 minutes.

Full Marks: 20

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| 1. | Mark the following statements as true or false. | 5 |
|  | 1. A circuit containing only OR and NOT gates must be a combinational circuit. 2. For two's complement numbers, the negative of a number can be found by adding one and then inverting the bits. 3. A disadvantage of two's complement numbers is that, unlike a sign-and magnitude representation, you cannot tell if a number is negative by looking at only one bit. 4. If a wire carries a logical value of 0, its voltage level will be 0 Volts. 5. In an S-R Latch, if both S and R inputs are asserted, Q and Q will both be 0. |  |
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| 2. | Can you build a device that, logically, behaves like an **OR** gate from only **AND** and **NOT** gates? If so, do so (just for the case where **AND** and **OR** gates have only two inputs). If not, explain why not. | 5 |
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| 3. | State the D’Morgan Theorem with example. | 5 |
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| 4. | What is Bubble pushing? Explain with Examples. | 5 |