

GATE:EC-49-2022

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I. QUESTION

Consider a boolean gate(D) where output Y is related to the inputs A and B as, $Y = A + \overline{B}$, where $+$ denotes logical OR operation. The Boolean inputs '0' and '1' are also available separately. Using instances of only D gates and inputs '0' and '1' (Select the correct options)

- 1) NAND logic can be implemented
- 2) OR logic cannot be implemented
- 3) NOR logic can be implemented
- 4) AND logic cannot be implemented