

Easy

Assistant Engineer (Electrical), Class 2025

Building Department

The systematic reduction of logic circuits is accomplished by _____

A

Symbolic reduction

B

TTL logic

C

Using Boolean algebra

Correct

D

Using a truth table

Correct Answer: C

Full Detailed Explanation

Concept & Reasoning Digital circuits can often implement the same Boolean function with fewer gates, fewer inputs and smaller propagation delay. Symbolic Boolean manipulation is a formal way to obtain an equivalent simplified expression. Karnaugh maps are another common graphical method, but among the listed options Boolean algebra is the standard answer. How to Solve It in the Exam Look for 'systematic reduction of logic circuits' Boolean algebra / K-map. Important Exam Point After simplification, a truth table can be used as an independent equivalence check. Related Revision Path This question sits in the revision path Digital Electronics Boolean Algebra Logic Simplification .

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