

Easy

Assistant Engineer (Electrical), Class 2025

Building Department

In a traction lift, what is the function of the counterweight?

A

It acts as an emergency brake

B

It balances the weight of the lift car and a portion of its load **Correct**

C

It houses the lift control panel

D

It generates electricity for the lift

Correct Answer: B

Full Detailed Explanation

Concept & Reasoning In a traction lift the car and counterweight are connected by ropes over a drive sheave. A common design balances approximately car mass plus 40–50% of rated payload, although exact balance factor varies. The motor then primarily handles the difference between car-side and counterweight-side weights plus losses/acceleration. **How to Solve It in the Exam** Counterweight reduces unbalanced load on the motor. **Important Exam Point** Counterweight is not the emergency brake; safety gear/governor handle overspeed protection. **Related Revision Path** This question sits in the revision path Building Electrical Services → Vertical Transportation → Traction Elevators .

Open live question on website:

<https://sarkariresultout.com/pyq/question/gpsc-ae-electrical-q298-lift-counterweight/>