

Easy

Assistant Engineer (Electrical), Class 2025

Building Department

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A

B

C

line voltage =

Correct

D

## Correct Answer: C

### Full Detailed Explanation

Concept & Reasoning A delta-connected load has each phase element across a pair of supply lines. Therefore the voltage across an individual phase is the same line-to-line voltage measured at the terminals. The  $\sqrt{3}$  relationship in delta applies to current, not voltage:  $I_L = \sqrt{3} I_{ph}$  (with a  $30^\circ$  phase displacement). In a star connection the voltage relationship is  $V_L = \sqrt{3} V_{ph}$ . How to Solve It in the Exam Delta: voltage same, current  $\sqrt{3}$ . Star: current same, voltage  $\sqrt{3}$ . Important Exam Point Write the star/delta pair together to avoid swapping the  $\sqrt{3}$  factor. Related Revision Path This question sits in the revision path Basic Electrical Engineering Three-Phase Circuits Delta Connection .

Open live question on website:

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