

Easy

Assistant Engineer (Electrical), Class 2025

Building Department

RMS value is defined based on which of the following?

A

Heating effect

Correct

B

Charge transfer

C

Current

D

Voltage

Correct Answer: A

Full Detailed Explanation

Concept & Reasoning: Joule heating is proportional to $i^2 R$, so alternating current must be squared before averaging. Taking the square root of the mean square gives an effective value directly comparable with DC for resistive power. For a sine wave, $I_{rms} = I_m / \sqrt{2}$. How to Solve It: In the Exam, RMS = equivalent heating effect. Important Exam Point: Square mean root is both the name and the calculation. Related Revision Path: This question sits in the revision path Basic Electrical Engineering → AC Fundamentals → RMS Value.

Open live question on website:

<https://sarkariresultout.com/pyq/question/gpsc-ae-electrical-q234-heating-effect-definition-of-rms/>