

Easy

Assistant Engineer (Electrical), Class 2025

Building Department

Which of the following is a correct representation of peak value in an AC circuit?

A

RMS value/Peak factor

B

RMS value*Form factor

C

RMS value/Form factor

D

RMS value*Peak factor

Correct

Correct Answer: D

Full Detailed Explanation

Concept & Reasoning The RMS value represents the DC-equivalent heating value of an AC quantity, whereas the peak value is the maximum instantaneous magnitude. Peak factor (also called crest factor) is defined as the ratio of peak value to RMS value. Rearranging that definition immediately gives the required representation. Form factor is a different ratio: RMS value divided by average rectified value, so it cannot be used to obtain the peak value directly unless additional waveform information is known. How to Solve It in the Exam Remember: peak factor connects PEAK RMS; form factor connects RMS average rectified value. Important Exam Point Write the definitions of peak factor and form factor before manipulating them; this prevents mixing the two ratios. Related Revision Path This question sits in the revision path Basic Electrical Engineering AC Fundamentals Waveform Factors .

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