

Easy

Assistant Engineer (Electrical), Class 2025

Building Department

Calculate the potential of a metal plate of charge 28C and capacitance 12 mF.

A

3.33 k ohm

B

2.33 k ohm

Correct

C

3.33 M ohm

D

2.33 M ohm

Correct Answer: B

Full Detailed Explanation

Concept & Reasoning The defining relationship for an isolated capacitor/conductor system is $Q = CV$. Convert millifarads to farads before division: $12 \text{ mF} = 0.012 \text{ F}$. Then $V = 28/0.012 = 2333.3$

V. The source option typography may show an incorrect unit in extracted text; the physical quantity asked is potential, so the unit must be volts, here approximately 2.33 kV.

How to Solve It in the Exam 10^{-3} F before using $V=Q/C$.

Important Exam Point Check the dimensional unit of the answer; electric potential must be in volts. Related Revision Path This question sits in the revision path Electromagnetic Fields Electrostatics Capacitance .

Open live question on website:

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