

Easy

Assistant Engineer (Electrical), Class 2025

Building Department

What happens to the MMF when the magnetic flux decreases?

A

Increases

B

Decreases

Correct

C

Remains constant

D

Becomes zero

Correct Answer: B

Full Detailed Explanation

Concept & Reasoning The magnetic-circuit analogue of Ohm's law is $\Phi = F / \mathcal{R}$, where $F = NI$ is magnetomotive force and $\mathcal{R}$ is reluctance. If geometry and material permeability remain unchanged, $\mathcal{R}$ is constant and flux varies directly with MMF. Thus a decrease in flux corresponds to a decrease in MMF. If reluctance changes at the same time, the conclusion would need more information, but the standard MCQ assumes the magnetic circuit itself is unchanged.

How to Solve It in the Exam Magnetic Ohm's law: flux $\propto$ current, MMF $\propto$ voltage, reluctance $\propto$ resistance.

Important Exam Point State the constant-reluctance assumption when using direct proportionality.

Related Revision Path This question sits in the revision path Electrical Machines Magnetic Circuits MMF and Flux .

Open live question on website:

<https://sarkariresultout.com/pyq/question/gpsc-ae-electrical-q111-reluctance-law/>