KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

ELECTRICAL ENGINEERING DEPARTMENT
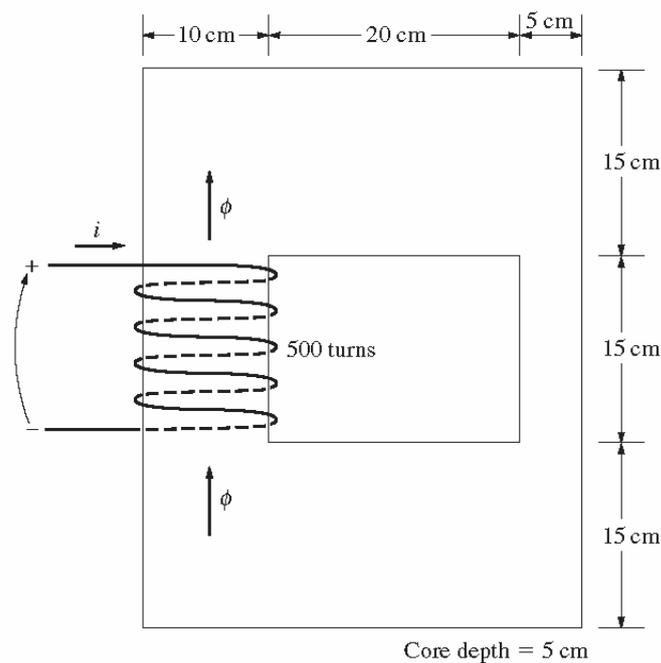
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EE-306

Key Solution

Quiz 2   Sec.: 6   I.D.:   Ser#:   Name:

Q.1 A ferromagnetic core is shown below.   (5 points)

a.   The flux density on the left right leg is half that of the right leg.
b.   The flux density on the top leg is double that of the left leg.
c.   The flux density on the right leg is same as that of the left leg.
d.   None of the above.

Q.2 A magnetic circuit has hysteresis loss of 60 W and eddy-current loss of 120 W at rated voltage and frequency. If the frequency is reduced by 50 % (assuming constant magnetic flux density), the hysteresis losses and eddy-current will be, respictively :   (5 points)
a.   30 W, and 60 W
b.   30 W, and 30 W
c.   15 W, and 60 W
d.   15 W, and 30 W