KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
ELECTRICAL ENGINEERING DEPARTMENT

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EE-306

Key Solution

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

Circle the correct answer.

1) A magnetic circuit has eddy-current loss of 100 W and hysteresis loss of 40 W at rated voltage and frequency. If the frequency is reduced by 50 % (assuming constant magnetic flux density), the eddy-current and hysteresis losses will be :
a.   25 W, and 20 W
b.   50 W, 10 W
c.   50 W, 20 W
d.   25 W, 10 W   (5 Marks)

2) The magnetic flux intensity (*H*) and magnetic field density (*B*) are related as follows:

a. $H = \mu B$

b. $H = \dfrac{B}{\mu_o \mu_r}$

c. $H = \dfrac{\mu_o}{\mu_r} B$

d. $H = \dfrac{\mu_r}{\mu_o} B$ (5 Marks)