## KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

## ELECTRICAL ENGINEERING DEPARTMENT

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## **Key Solutions**

Quize # 2	Sec. 3	Serial #	Name:	I.D.#
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Circle the correct answer.

- 1) 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:
- a. 30 W, and 60 W
- b. 30 W, and 30 W
- c. 15 W, and 60 W
- d. 15 W, and 30 W

(5 Marks)

- 2) The magnetic flux intensity (H) and magnetic field density (B) are related as follows:
- a.  $H = \mu B$

**b.** 
$$H = \frac{B}{\mu_o \mu_r}$$

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

d. 
$$H = \frac{\mu_r}{\mu_o} B$$

(5 Marks)