

**KING FAHD UNIVERSITY OF PETROLEUM & MINERALS**  
**ELECTRICAL ENGINEERING DEPARTMENT**  
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**EE-360 (152)**

**Key Solution**

Quiz # 1      Sec.      Serial #      Name:      I.D.#

Circle the correct answer.

1) Although most of the flux produced by an excited coil in a ring core remains inside the core, there are small amount of the flux that do leave the core and known as (3 Marks)

- a. The fringing effect.
- b. The flux intensity.
- c. The flux leakage.**
- d. The flux residual.

2) A ring core has a cross-sectional area of  $10 \text{ cm}^2$  and mean length of 40 cm. A coil of 400 turns is placed on it. The relative permeability of the core is 5000. If the magnetic flux density in the core is 1.5 T, the flux flowing in the core is (4 Marks)

- a. 1500 Wb
- b. 150 Wb
- c. 1.5 mWb**
- d. 0.15 Wb

3) When a ferromagnetic material is excited from a DC source, and the source is removed, the material will have some (...). This can be removed by applying (...) in the opposite direction of the original current direction. (3 Marks)

- a. flux leakage, corecive force.
- b. flux leakage, magnetimotive force.
- c. flux residual, corecive force.**
- d. flux residual, magnetimotive force.