

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
ELECTRICAL ENGINEERING DEPARTMENT

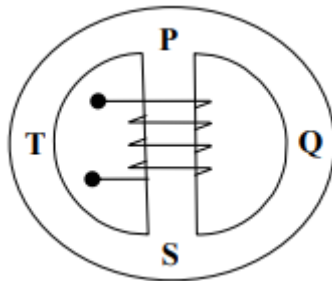
Dr. Ibrahim O. Habiballah
EE-306

Key Solution

Quiz 2 Sec.: 3 I.D.: Ser#: Name:

Q.1 . (6-points)

For the magnetic circuit shown below the reluctance of the central limb (PS) is 10×10^5 AT/Wb and the reluctance of the outer limbs (PTS and PQS) are same and equal to 15×10^5 AT/Wb. To produce 0.5 mWb in PQS, the mmf to be produced by the coil is:



- a. 750 AT.
- b. 875 AT
- c. 1750 AT.**
- d. 2500 AT.

Q.2 (4-points)

A magnetic circuit has a continuous core of a ferromagnetic material. Coil is supplied from a battery and draws a certain amount of exciting current producing a certain amount of flux in the core. If now an air gap is introduced in the core, the exciting current will:

- a. increase.
- b. remains same.
- c. decrease.**
- d. becomes ZERO.