

Q- Find the total flux linkage of the coil shown in figure if each flux line represents 2×10^{-7} Wb.

(a) What is the equivalent flux linking all of the turns in Figure?

(b) What is the flux linking per turn?

(a) In all there are eighteen turns of the flux line

One with each wire = 9

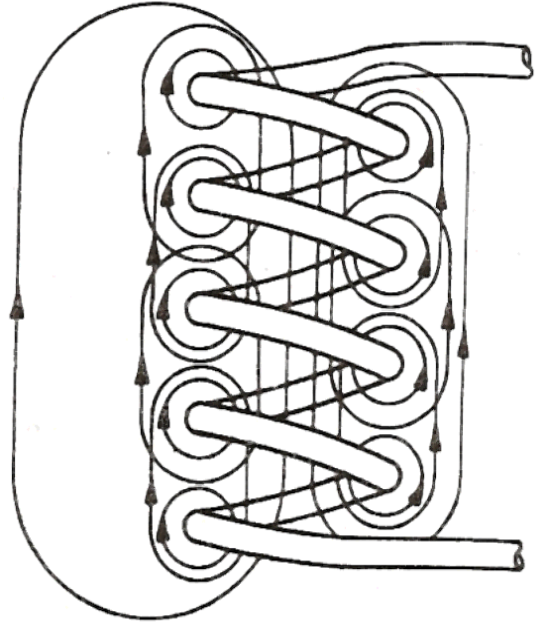
One with each pair = 7

One on each side = 2

In all total number of turns = 18

Hence the total flux linkage = $18 \times 2 \times 10^{-7}$

$$= \mathbf{3.6 \times 10^{-6} \text{ Wb.}}$$



(b) There is 4.5 turns in the coil that is why the number of wires on either side is not same. The equivalent (average) flux linking per turn will be

$$= 36 \times 10^{-7} \text{ Wb} / 4.5 = \mathbf{8.0 \times 10^{-7} \text{ Wb.}}$$