

Example 10

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A pair of adjacent coils has a mutual inductance of 1.5H . If the current in one coil changes from 0 to 20A in 0.5s , what is the change of magnetic flux linked with the other coil?

Solution:-

Let $\phi_2 =$ magnetic flux linked with coil 2

$$\phi_2 = MI_1$$

\therefore Change in magnetic flux $= \Delta\phi_2 = M\Delta I_1$,

$$\therefore \Delta\phi_2 = 1.5 \times (20 - 0) = 30 \text{ weber} \quad \text{Ans}$$

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