

**The Physics of Energy, Explained Simply
&
The Physics of Energy For Beginners**

Magnetic Energy Questions - Answers

Equation: $U = \frac{1}{2} LI^2$

U = Magnetic energy stored (J),

L = Inductance (H), I = Current (A)

1. $U = 0.5 \times 2 \text{ H} \times (3 \text{ A})^2 = 9.0 \text{ J}$
2. $U = 0.5 \times 0.5 \text{ H} \times (4 \text{ A})^2 = 4.0 \text{ J}$
3. $U = 0.5 \times 1.5 \text{ H} \times (2 \text{ A})^2 = 3.0 \text{ J}$
4. $U = 0.5 \times 3 \text{ H} \times (1.5 \text{ A})^2 = 3.38 \text{ J}$
5. $U = 0.5 \times 0.8 \text{ H} \times (5 \text{ A})^2 = 10.0 \text{ J}$
6. $U = 0.5 \times 1.2 \text{ H} \times (2.5 \text{ A})^2 = 3.75 \text{ J}$
7. $U = 0.5 \times 0.3 \text{ H} \times (3 \text{ A})^2 = 1.35 \text{ J}$
8. $U = 0.5 \times 2.5 \text{ H} \times (1.2 \text{ A})^2 = 1.8 \text{ J}$
9. $U = 0.5 \times 1 \text{ H} \times (4.5 \text{ A})^2 = 10.12 \text{ J}$
10. $U = 0.5 \times 0.9 \text{ H} \times (3.5 \text{ A})^2 = 5.51 \text{ J}$

