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Electrical Inductors MCQ Test

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Below is the **Electrical Inductors MCQ** test that checks your basic knowledge of Electrical Inductors. This **Electrical Inductors MCQ Test** contains 20 Multiple Choice Questions. You have to select the right answer to the question. apart from this, you can also download here the **Electrical Inductors MCQ PDF**, completely free.

Q1. Inductance is the property of an inductor that produces an opposition to any change in current.

- **A. True**
- B. False

Q2. The inductance of an iron-core coil decreases if ____.

- **A. The number of turns is decreased**
- B. The iron core is removed
- C. The length of the coil decreases
- D. None of the above

Q3. A 5 mH, a 4.3 mH, and a 0.6 mH inductor are connected in parallel. The total inductance is ____.

- A. 9.9 mH
- B. Greater than 5 mH
- C. 9.9 mH or greater than 5 mH
- **D. Less than 0.6 mH**

Q4. Electricity may be generated by a wire:

- A. carrying current
- **B. passing through a flux field**

- C. that has neutral domains
- D. wrapped as a coil

Q5. The electrical energy consumed by a coil is stored in the form of a magnetic field.

- A. True
- B. False

Q6. When the current through an inductor is cut in half, the amount of energy stored in the electromagnetic field ____.

- A. is quartered
- B. quadruples
- C. doubles
- D. does not change

Q7. The term 'self-inductance' is used when a conductor has a voltage induced in it by:

- A. its own magnetic field
- B. nearby electromotive force
- C. its own electromotive force
- D. a nearby magnetic field

Q8. What is magnetic flux?

- A. The number of lines of force in webers
- B. The number of lines of force in maxwells
- C. The number of lines of force in teslas
- D. The number of lines of force in flux density

Q9. Which type of device consists of a coil with a moveable iron core?

- A. solenoid
- B. reed switch
- C. relay
- D. armature

Q10. Opposition to current flow without the dissipation of energy is called ____.

- A. resistance
- **B. inductive reactance**
- C. counter emf
- D. impedance

Q11. What is the name of the part inside a relay that is moved by the action of the electromagnet?

- **A. armature**
- B. conductor
- C. contacts
- D. solenoid

Q12. A crack in the magnetic path of an inductor will result in ____.

- A. unchanged inductance
- B. increased inductance
- C. zero inductance
- **D. reduced inductance**

Q13. The coefficient of coupling between two air core coils depends on ____.

- A. Self inductance of two coils only
- B. Mutual inductance between two coils only
- **C. Mutual inductance and a self inductance of two coils**
- D. None of the above

Q14. What is the voltage across a coil when $di/dt = 20 \text{ mA}/\mu\text{s}$ and $L = 8 \mu\text{H}$?

- A. 16 mV
- **B. 160 mV**
- C. 1.6 mV
- D. 2.5 mV

Q15. The permeability of a core material is an indication of the ability of the material to

establish a magnetic field.

- **A. True**
- B. False

Q16. Which of the following circuit element stores energy in the electromagnetic field?

- **A. Inductance**
- B. Condenser
- C. Variable resistor
- D. Resistance

Q17. A sine wave voltage is applied across an inductor, When the frequency of the voltage is decreased, the current is increased.

- **A. True**
- B. False

Q18. An open coil has ____.

- A. Zero resistance and inductance
- **B. Infinite resistance and zero inductance**
- C. Infinite resistance and normal inductance
- D. Zero resistance and high inductance

Q19. The direction of induced e.m.f. can be found by which of the following law?

- A. Laplace's law
- B. Kirchhoff's voltage law
- C. Fleming's right hand rule
- **D. Lenz's law**

Q20. Mutual inductance between two magnetically coupled coils depends on:

- A. Permeability of the core material
- B. Number of turns of the coils
- C. Cross sectional area of their common core
- **D. All of the above**

Q21. Inductance is indirectly proportional to the square of the number of turns, the permeability, and the cross-sectional area of the core.

- A. True
- **B. False**

Q22. A 240 μ H inductor is equivalent to a ___ inductor.

- **A. 0.240 mH**
- B. 0.000240 mH
- C. 240 mH
- D. 240 H

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