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AC Fundamentals, Circuits, and Circuit Theory MCQ Test

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Below are the **AC Fundamentals, Circuits, and Circuit Theory MCQ test** that checks your basic knowledge of AC Fundamentals, Circuits, and Circuit Theory. This **AC Fundamentals, Circuits, and Circuit Theory MCQ Test** contains 20 Multiple Choice Questions. You have to select the right answer to the question. Finally, you can also take the Online Quiz from the **Take AC Fundamentals, Circuits, and Circuit Theory Quiz** Button.

Q1. Which of the following option refers to a parallel circuit?

- A. The current through each element is same
- B. The equivalent resistance is greater than any one of the resistors
- C. The voltage across element is in proportion to its resistance value
- **D. The current through any one element is less than the source current**

Q2. With which of the following option the transient currents are associated?

- A. Resistance of the circuit
- B. Impedance of the circuit
- C. Applied voltage to the circuit
- **D. Changes in the stored energy in the inductors and capacitors**

Q3. Power factor of an electrical circuit is equal to

- A. R/Z
- B. Ratio of useful current to total current I_w/I
- C. Cosine of phase angle difference between current and voltage
- **D. All of the above**

Q4. The time constant of a series R-C circuit is given by

- **A. RC**
- B. R/C
- C. RC2
- D. R2C

Q5. The ratio of active power to apparent power is known as which factor?

- A. Form
- B. Load
- **C. Power**
- D. Demand

Q6. Power factor of electric bulb is

- A. Zero
- **B. Unity**
- C. Leading
- D. Lagging

Q7. The power factor at resonance in R-L-C parallel circuit is

- **A. Unity**
- B. Zero
- C. 0.8 leading
- D. 0.08 lagging

Q8. The period of a wave is

- A. Expressed in amperes
- B. The same as frequency
- **C. Time required to complete one cycle**
- D. None of the above

Q9. Which of the following coil will have large resonant frequency?

- A. A coil with low resistance
- B. A coil with large resistance
- C. A coil with low distributed capacitance

- **D. A coil with large distributed capacitance**

Q10. The r.m.s. value and mean value is the same in the case of

- A. Sine wave
- **B. Square wave**
- C. Triangular wave
- D. None of the above

Q11. For a frequency of 200 Hz, the time period will be

- A. 0.5 s
- B. 0.05 s
- **C. 0.005 s**
- D. 0.0005 s

Q12. Capacitive reactance is more when

- A. Capacitance is less and frequency of supply is more
- B. Capacitance is more and frequency of supply is less
- **C. Capacitance is less and frequency of supply is less**
- D. Capacitance is more and frequency of supply is more

Q13. Time constant of an inductive circuit

- A. Increases with decrease of inductance and increase of resistance
- **B. Increases with increase of inductance and decrease of resistance**
- C. Increases with the decrease of inductance and decrease of resistance
- D. None of the above

Q14. Capacitive susceptance is a measure of

- A. Reactive power in a circuit
- **B. A purely capacitive circuit's ability to pass current**
- C. The extent of neutralization of reactive power in a circuit
- D. A purely capacitive circuit's ability to resist the flow of current

Q15. The double energy transient occur in the

- A. R-L circuit
- B. R-C circuit
- **C. R-L-C circuit**
- D. Purely inductive circuit

Q16. The power factor of a D.C. circuit is always

- **A. Unity**
- B. Zero
- C. Less than unity
- D. Greater than unity

Q17. In a series resonant circuit, the impedance of the circuit is

- A. Zero
- **B. Minimum**
- C. Maximum
- D. None of the above

Q18. Power factor of the following circuit will be zero

- A. Inductance
- B. Capacitance
- C. Resistance
- **D. Both A & B**

Q19. Power factor of an inductive circuit is usually improved by connecting capacitor to it in

- A. Series
- **B. Parallel**
- C. Both A & B
- D. None of the above

Q20. Which of the following circuit component opposes the change in the circuit voltage ?

- A. Inductance
- B. Resistance
- **C. Capacitance**
- D. Conductance

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