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Q1. In a parallel RLC circuit, which value may always be used as a vector reference?

- A. voltage
- **B.** Current
- C. reactance
- **D.** resistance

Q2. current in a series rlc circuit may always be used as

- A. An angle
- B. A reference
- C. A leading vector
- **D.** A lagging vector

Q3. Series RLC voltage or impedance totals must be calculated by:

- A. Adding vectors
- **B.** Graphing the angles
- C. Subtracting the values
- **D.** Multiplying the values

Q4. If the bandwidth of a filter increases:

• A. Q decreases

- **B.** the roll-off rate increases
- C. the center frequency decreases
- **D.** the half-power frequency decreases

Q5. Current in a series RLC circuit may always be used as a

- A. Angle
- B. Reference
- C. Leading vector
- **D.** Lagging vector

Q6. Which of the following statement best describes reactance in a series RLC circuit?

- A. Resistance is always dominant.
- **B.** Inductive reactance is always dominant.
- C. Capacitive reactance is always dominant
- D. The larger of the two reactances is dominant.

Q7. Can a parallel tuned circuit be used to couple energy from one circuit to another?

- A. Yes
- **B.** No

Q8. If the resistance in parallel with a parallel resonant circuit is reduced, the bandwidth

- A. Increases
- B. Decreases
- C. Disappears
- **D.** None of the above

Q9. The current is minimum at resonance in a series RLC circuit?

- A. True
- B. False

Q10. If the value of C in a series RLC circuit is decreased, the resonant frequency

- A. Increases
- **B.** Is not affected
- C. Decreases
- **D.** Is reduced to zero

Q11. A series resonant circuit is commonly called a tank circuit.

- A. True
- B. False

Q12. What do you mean by RLC circuit?

- A. an electrical circuit consisting of a resistor (R), an inductor (L), and a capacitor (C), connected in series or in parallel
- **B.** Volatage
- C. Both A and B
- **D.** None of the above

Q13. Electrical resonance occurs in an electric circuit at a particular resonant frequency when the impedances or admittances of circuit elements cancel each other.

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

Q14. If the value of C in a series RLC circuit is decreased, the resonant frequency ____.

- A. Is not affected
- B. Increases
- C. Is reduced to zero
- **D.** Decreases

Q15. A certain series resonant circuit has a bandwidth of 2 kHz. If the existing coil is replaced with one having a higher value of Q, the bandwidth will ____.

- A. increase
- **B.** remain the same
- C. decrease

• **D.** be less selective

Q16. In a series RLC circuit, the larger reactance determines the net reactance of the circuit.

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

Q17. A 15 ? resistor, a 220 μ H coil, and a 60 pF capacitor are in series across an ac source. What is the bandwidth of the circuit?

- A. 138 MHz
- B. 10,866 Hz
- **C.** 1,907 Hz
- **D.** 138 kHz

Q18. As XL = XC in a series resonance circuit, the impedance is ___.

- A. purely capacitive
- **B.** purely inductiv
- C. purely resistive
- **D.** capacitive and inductive

Q19. Is at resonant frequency, the voltage across capacitor is equal to the voltage across inductor?

- A. Yes
- **B.** No

Q20. To tune a parallel resonant circuit to a higher frequency the capacitance should be:

- A. Left alone
- **B.** Increased
- C. Decreased
- **D.** None of the above

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