14. Which of the following is a requirement for a series-resonant RLC circuit?

A. $L = C$
B. $R = C$
C. $R = L$
D. $IX_L = IX_C$

15. In a series-resonant RLC circuit, the voltage across L is _____ with the voltage across C.

A. in phase
B. 90° out of phase
C. 180° out of phase
D. 270° out of phase

16. What is the sum of 130 + j180 and 5 – j30?

A. 135 + j210
B. 135 + j150
C. 135 – j150
D. $(135^2) + (J150)^2$

17. $40\angle 40^\circ \times 30\angle 20^\circ$ equals

A. $1200\angle 60^\circ$
B. $70\angle 80^\circ$
C. $70\angle 800^\circ$
D. $0.75\angle 60^\circ$

18. Which of the following is equal to the angular velocity (ω)?

A. $\omega = 2fC$
B. $\omega = 2\pi L$
C. $\omega = 2\pi R$
D. $\omega = 2\pi f$

19. Parasitic oscillations can be caused by

A. distributed components.
B. very low capacitance in an RLC circuit.
C. very low inductance in an RLC circuit.
D. very high resistance in an RLC circuit.

20. Which of the following is a parasitic suppressor?

A. Bead ledge
B. Ferrite bead
C. A long piece of wire
D. Back-to-back transistors