21. A 100?F capacitor with 12V source in series having frequency 50Hz will offer a capacitive reactance of about

    A. 32?   **B.** 62?

    C. 50?   **D.** 100?

Answer: Option **A**

22. If a glass plate is inserted in between the plate of a capacitor in series with a lighted bulb the brightness of the bulb

    A. Remains same   **B.** Brightness increases

    C. Brightness decreases   **D.** No light

Answer: Option **B**

23. A pure variable resistor is connected in series with a pure capacitor of fixed capacitance. The impedance of the circuit

    A. Remains   **B.** Becomes infinite

    C. Becomes zero   **D.** Increases

Answer: Option **D**

24. A wire of resistance R is coiled inductively so that its inductance is L. The impedance of the coil at a frequency of f is

    A. (R+2?fL)   **B.** R+1/2?fL

    C. (R2+f2L2)   **D.** (R2+4?2f2L2)

Answer: Option **D**

25. Ammeter connected in an AC circuit measures

    A. Exact value of current   **B.** rms value of current

    C. Net value of current   **D.** Peak value of current

Answer: Option **B**

26. When a pure inductor of inductance L and a pure capacitor of capacitance C are connected in parallel to a sinusoidal potential difference V the potential difference across both L & C will be

    A. Same   B. Different

    C. At L will be more than at C   D. At L will be less than at C

    Answer: Option A

27. An alternating potential difference is connected across a pure resistor and the frequency of the supply is varied but the rms value of the voltage is kept constant. The mean rate of heat dissipated from the resistor is

    A. Directly proportional to f   B. Directly proportional to ??f

    C. Directly proportional to f2   D. Inversely proportional to f

    Answer: Option C

28. What is the self inductance of a coil in which an induced emf of 2V is set up when the current changes at the rate of 4 As-1?

    A. 0.5 mH   B. 0.5H

    C. 2.0H   D. 8.0H

    Answer: Option B

29. The frequency of a circuit consisting of a capacitance C and a resistor R is

    A. C/R   B. R/C

    C. 1/RC   D. 1/ ??RC

    Answer: Option C

30. A 10? electric heater is connected to a 220V 50Hz mains supply. What is the peak value of the potential difference across the heater element?

    A. 220V   B. 220/ ??2V

C. 110V   D. 220 ???2V