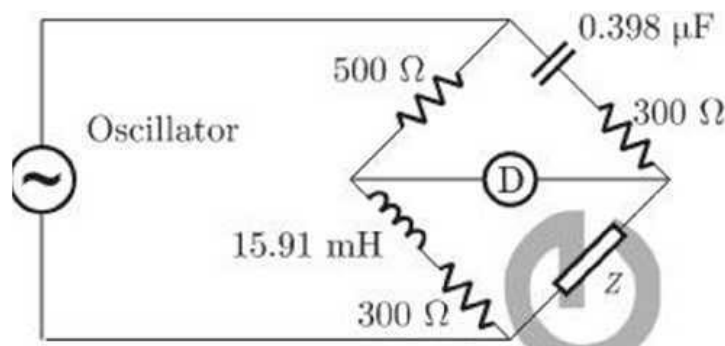


## ELECTRICAL MEASUREMENTS

- Q) A full wave fully controlled bridge has a highly inductive load with resistance of  $55 \Omega$  and supply voltage of  $110 \text{ V}$ ,  $50 \text{ Hz}$  what is the power factor of circuit when firing angle is  $80^\circ$ ?--> **0.156**
- Q) Maxwell's bridge is used to measure--> **Inductance.**
- Q) Schering bridge is used to measure--> **Capacitance.**
- Q) Which one of the following is measured by the loss of charge method--> **High R**
- Q) The bridge method is used for finding mutual inductor is--> **Heaviside-Campbell's bridge.**
- Q) Which method is suitable for the measurement of resistivity of good conductors of electricity?--> **Kelvin's double bridge method.**
- Q) Head phones / audio amplifiers are used as balance detectors in AC bridge at frequency of--> **More than 4 K Hz**
- Q) The bridge used to measure insulation--> **Schering**
- Q) With Kelvin double bridge method for measurement of resistance the accuracy can be of the order of--> **0.5%**
- Q) As per standard classification Schering bridge is of type--> **product-arm, real**
- Q) The AC bridge shown in the figure is used to measure the impedance  $Z$ . If the bridge is balanced for oscillator frequency  $f=2\text{kHz}$ , then the impedance  $Z$  will be



-->  **$(260 + j0) \Omega$**

- Q) Wagner Earth devices in AC bridge circuits are used for--> **Eliminating all node to earth capacitances**
- Q) In Wein's bridge the output frequency is determined by--> **G. RC combination**
- Q) A megger is usually--> **H. moving coil type instrument**
- Q) A slide-wire is used for measurement of current in the circuit. The voltage drop across standard resistor of  $0.2 \text{ ohms}$  is balanced at  $83 \text{ cm}$ . Find the magnitude of current, if the standard cell emf of  $1.53 \text{ volts}$  is balanced at  $42 \text{ m}$ --> **H. 14.5A**
- Q) Most sensitive galvanometer is--> **vibration galvanometer**
- Q) Ballistic tests are used in magnetic measurements for determination of--> **Flux density B, magnetizing force H and B-H curve and hysteresis loop of the specimen**
- Q) Damping of the ballistic galvanometer is made small to--> **Get first deflection large**
- Q) Maxwell's inductance-capacitance bridge is used for measurement of inductance of--> **Low Q coils only**
- Q) The Q-meter works on the principle of--> **Series resonance**
- Q) In magnetic measurements, Lloyd Fisher square is used in the determination of which one of the following?--> **Iron losses**
- Q) Iron losses in a specimen of iron are determined by using a co-ordinate type of potentiometer, the loss component current is read by--> **In phase potentiometer**
- Q) A ballistic galvanometer should be designed with--> **A large period and a negligible damping constant**
- Q) Multimeter can be used for measuring--> **C. C. and D.C. quantities both**
- Q) In a ballistic galvanometer, the deflecting torque is proportional to--> **The current through coil**
- Q) Potentiometer is basically \_\_\_\_\_ instrument--> **Null type**
- Q) Potentiometer is an \_\_\_\_\_ instrument--> **Comparison**

## ELECTRICAL MEASUREMENTS

Q)The input resistance of a cathode ray oscilloscope is of order of--> **Mega ohm**

Q)voltages  $V_y=100 \sin 1000 t$  and  $V_x= 50 \sin 1000t$  are connected to Y and X terminals of a CRO, respectively. What is the shape of the figure seen on the CRO?--> **A straight line**

Q)The simultaneous application of signals  $x(t)$  and  $y(t)$  to the horizontal and vertical plates, respectively, of an oscilloscope, produces a vertical figure-of-8 display. If P and Q are constants and  $x(t) = P \sin(4t+30^\circ)$ , then  $y(t)$  is equal to-->  **$Q \sin(2t+15^\circ)$**

Q)An average-reading digital multi-meter reads 10 V when fed with a triangular wave, symmetric about the time-axis. For the same input an rms-reading meter will read-->  $20\sqrt{3}$

Q)A Weston synchronoscope is a--> **dynamometer instrument**

Q)In a Weston synchronoscope, the fixed coils are connected across--> **b incoming alternator**

Q)A Weston frequency meter is--> **b moving iron instrument**

Q)X and Y inputs of a CRO are respectively  $V \sin \omega t$  and  $V \sin \omega t$ . the resulting lissajous pattern will be--> **A straight line**

Q)Two equal voltages of same frequency applied to X and Y plates of a CRO, produces a circle on the screen. The phase difference between the two voltages will be-->  **$90^\circ$**