

Answer any five Questions including Q No.1 & 2
Figures in the right hand margin indicates marks

1. Answer All questions

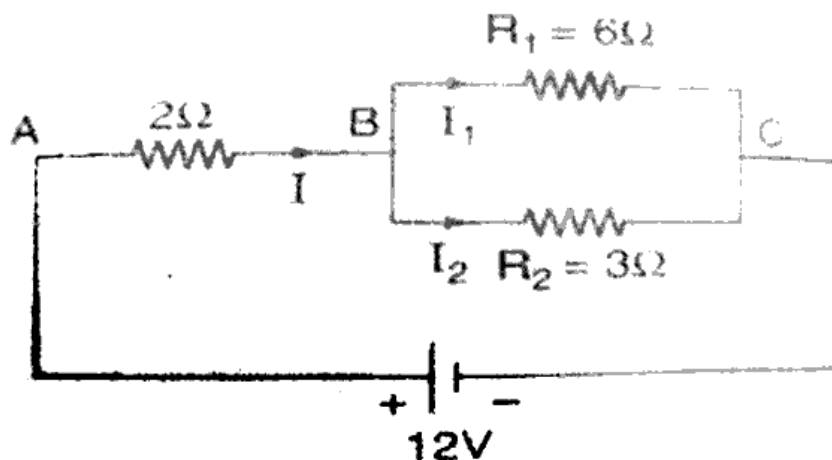
2 x 10

- What is the function of economiser in thermal power plant?
- Write down basic protective device used in house hold wiring.
- What is the function of commutator in a D.C generator?
- Sketch connection diagram of :-
(i) Watt meter
(ii) Energy meter
- What is the total resistance of the resistances 2Ω , 4Ω , 6Ω , 8Ω and 10Ω connected in parallel?
- Write down the difference between conductor and semiconductor.
- What is the need of biasing?
- Write down the difference between oscillator and amplifier?
- What is modulation and state different types of modulation?
- What is passive transducer? Write down 2 example of it.

2. Answer Any Six Questions

6 x 5

- Explain different types of wiring used in Electrical installation.
-



Find the value of I_1 and I_2 .

- Derive the expression for instantaneous current when A.C voltage

- d. passed through a pure capacitor only.
- e. Define Electronic Emission & explain different types of Emission.
- f. Explain the working principle of full wave bridge rectifier.
- g. Explain the concept of transducer and sensor and state the difference between them.
- h. Explain the working principle of single-phase CE amplifier.
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3. A resistance of 1Ω , inductance $0.1H$ and capacitance $50\mu F$ are connected in series across a $230V$, 50 Hz supply. Find (a) X_L (b) X_C (c) Z (d) I (e) p.f. (f) active power (g) reactive power (h) apparent power (i) phase angle and Draw impedance and power triangle of Series RLC circuit. 10
4. Explain the working of a hydro power plant with block diagram. 10
5. A house is connected with following electrical loads (i) 2 bulbs 100 watt each running 6hrs daily (ii) 2 tube light 40watt each running 5hrs daily (iii) one heater 1.5KW running 2hrs daily (iv) 4 fans 60W each running 10hrs daily (v) One motor 1.5HP running 2hrs daily. Calculate monthly electric bill for August, 2021 if the unit cost is Rs.4.20. 10
6. What is CRO? Explain working principle of CRO with simple Block diagram? 10
7. Explain the working principle and use of PN junction diode with neat circuit diagram. 10

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