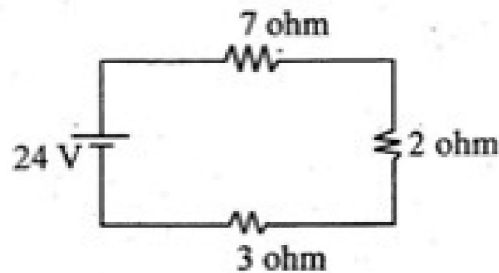


(2)

- (vi) What is slip ?
- (vii) Write Kirchhoff's current law and voltage law.
2. (a) Explain Fleming's Left hand rule and Right hand rule. 4
- (b) Draw block diagram of a thermal power plant and state the function of blocks. 10
3. (a) Calculate the voltage drop across 2 ohm resistance. 4



- (b) A series R, L, C circuit having $R = 15 \text{ ohm}$, $L = 0.2 \text{ H}$ and $C = 100 \mu\text{F}$ are connected in series across, $200 \text{ V}, 50 \text{ Hz}$ a.c. supply. Calculate (i) total impedance (ii) current (iii) power factor (iv) power consumed in the circuit. 10

(3)

4. (a) Classify D.C. generators. 4
- (b) A shunt generator delivers 450 A at 230 V and the resistance of the shunt field and armature are 50 ohm and 0.03 ohm respectively. Calculate the generated emf. 10
5. (a) Write principle of operation of D.C. motor. 4
- (b) Write principle of operation of 3-phase induction motor. 10
6. (a) State different types of wiring. 4
- (b) A residential house has the following loads : 10
- (i) 3 Tube-light 40 watt each used 8 hours daily
- (ii) 4 C.F.L lamp 18 watt each used 10 hours daily
- (iii) 4 Fans 60 watt each used 8 hours daily
- (iv) One heater 1500 watt used 5 hours daily.
- Find the energy bill for the month of March when the unit price of the energy is Rs. 2.