

BASANT'S SCIENCE ACADEMY

CLASS-X

FULL MARK-40

MONTHLY TEST

TIME-1.15HR

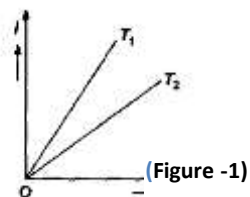
SUB-PHYSICS & CHEMISTRY

CHAPTER-ELECTRICITY & CHEMICAL REACTION & EQUATION

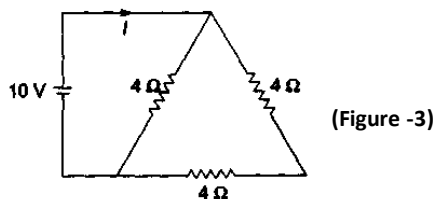
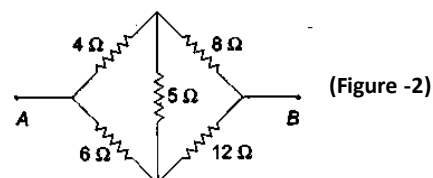
Section-A

Number allotment -1 to 5 = 1 mark, 6 to 10 = 2 mark 11-(a-3 mark, b-2 mark)

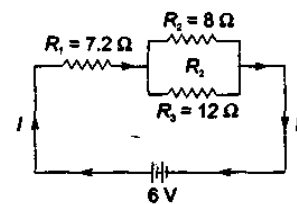
- State the law, which relates the current in a conductor to the potential difference across its ends.
- Define SI unit of electric power?
- State the factors on which the resistance of a-conductor depends.
- What is the term for the reciprocal of resistance?
- What is the law of combination of resistances in series?
- A graph is plotted between V (potential difference) and I (current) for a metal at two different temperatures T_1 and T_2 . What is the relationship between T_1 and T_2 ? (Figure -1)



- What is the resistance between A and B?(Figure -2)
- A bulb is rated at 200 V-100 W. Five such bulbs burn for four hours. What is the electrical energy consumed? Calculate the cost if the rate is 50 paise per unit.
- What is the current I in the given network? (Figure -2)



- An electric bulb of 40 W is connected to a source of 220 V. (a) How much current will be drawn by the bulb? (b) What is the resistance of the bulb?
- (a) In the circuit diagram given below, find: (i) total resistance of the circuit, (ii) total current flowing in the circuit, and (iii) the potential difference across R_1 ? (Figure 4)
- (b) You are given three resistances of 1, 2 and 3 Ω . Show by diagrams, how will you get a resistance of (i) $6/11 \Omega$ (ii) 1.5 Ω ?



Section-B

Number allotment -12 to 16 = 1 mark, 17 to 21 = 2 mark 22-(a-3 mark, b-2 mark)

- What is the name given to the expression of a reaction in terms of formulae of reactants and products?
- What type of reaction takes place when ammonium cyanate (NH_4CNO) is heated to give urea (H_2CONH_2)?
- Give one example of a redox reaction which is also a combination reaction.
- Name the substance being reduced in the reaction. $\text{MnO}_2 + 4\text{HCl} \longrightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$.

