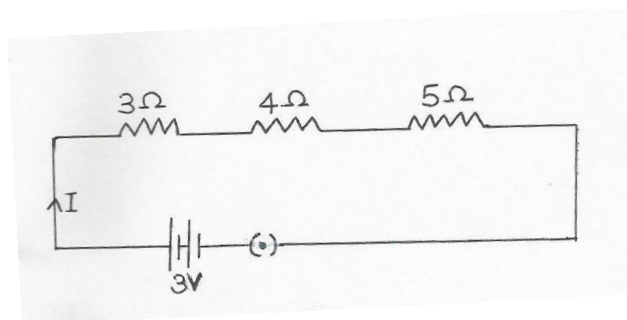


Answer the following:-

1. An electric geyser has the ratings 2000W, 220V marked on it. What should be the minimum rating in whole number of a fuse wire that may be required for safe use with this geyser? (1)
2. Name two devices based on Joule's heating effect. (1)
3. Name the acids present in (a) ant sting and (b) tamarind. (1)
4. Which one is a stronger acid, one with $P^H=5$ or with $P^H =2$? (1)
5. During the breathing cycle, the lungs always contain a residual volume of air. Justify. (1)
6. Study the following circuit and calculate the potential difference across 5Ω resistor. (2)

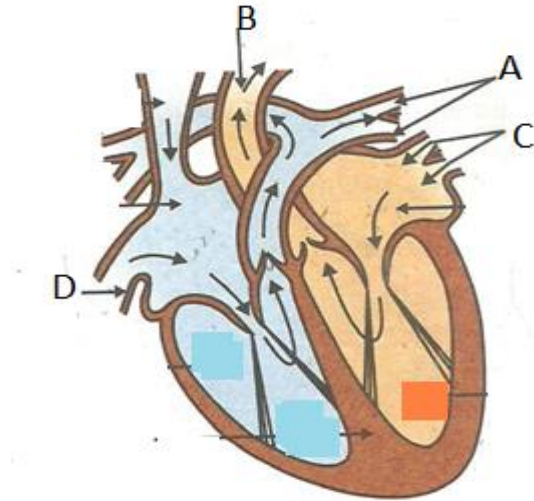


7. (a) Why is it advised not to use copper or brass vessels to store pickles or curd?
(b) Name the gas evolved when a dilute HCl reacts with sodium hydrogen carbonate. (2)
8. Take a mixture of sugar solution and little yeast in a test tube. Fit the cork with a bent glass tube to mouth of the test tube. Dip the free end of the bent tube into a test tube containing lime water.
(a) What change is observed in the lime water and why?
(b) Give the overall equation showing the products of respiration. Mention the term for the above reaction. (2)
9. With the help of a circuit diagram prove that when a number of resistors are connected in parallel the reciprocal of the equivalent resistance of the combination is equal to the sum of the reciprocals of the individual resistances of the resistors? (3)
10. (a) HCl and HNO_3 show acidic characters in aqueous solution while alcohol and glucose solution do not. Give reasons.

(b) Identify the substances that are oxidized and that are reduced in the following chemical reaction.



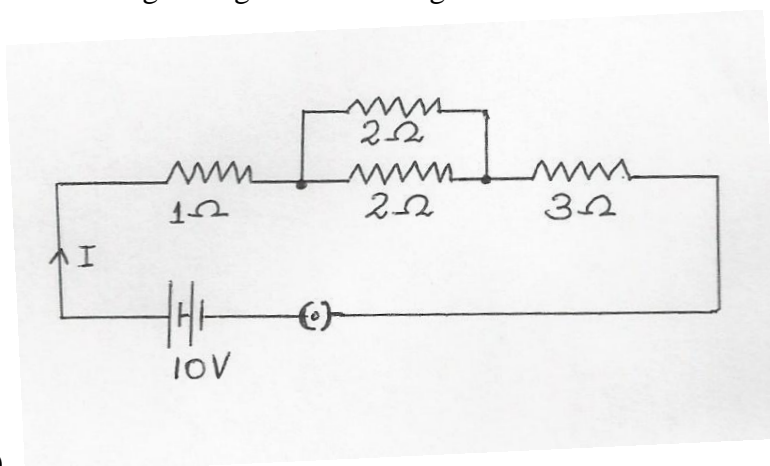
11. (a) In the give figure showing the sectional view of the human heart, label the parts marked A to D. (3)



(b) What is the major driving force in the movement of water during the day and at night in plants?

Answer the following:-

1. State Joule's law of heating. (1)
2. 320J of heat is produced in 10s in a 2Ω resistor. Find the amount of current flowing through the resistor. (1)
3. Name the acids present in Vinegar and Nettle sting. (1)
4. The P^H of a sample of vegetable soup was found to be 6.5. How is this soup likely to taste? (1)
5. Separation of oxygenated and deoxygenated blood is essential in mammals and birds. Give reason. (1)
6. Find the current flowing through the following circuit. (1)

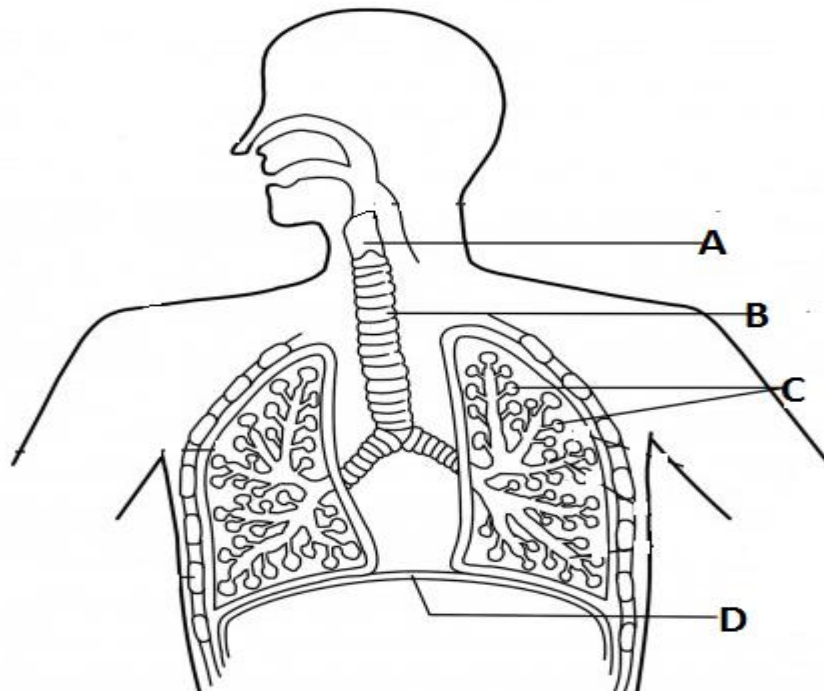


- (2)
7. (a) Which bases are called alkalis? Give an example of an alkali. (1)
(b) Name the gas usually liberated when a dilute acid reacts with a metal. (1)
8. A healthy potted plant taken and leaves of the plant coated with vaseline to block the stomata. Will the plant remain healthy for long? State two reasons. (2)
9. With the help of a circuit diagram derive the relation for effective equivalent resistance, when resistances are connected in series. (3)
10. (a) While diluting an acid, why is it recommended that the acid should be added to water and not water to acid? (3)
(b) How does the P^H of the acidic solution change when it is diluted?

- (c) Identify the substances that are oxidized and that are reduced in the following chemical reaction.



11. (a) In the given diagram showing the schematic representation of respiration, label the parts marked A to D. (3)



- (b) How does transport of materials in the xylem differ from that of phloem?(two points)
