

**CT PUBLIC SCHOOL
HOLIDAY HOMEWORK
SCIENCE
Class – X**

Chapter –ELECTRICITY

1. Define the term 'resistivity' of a material.
2. A wire of resistance 5 ohm is bent in form of closed circle. What is the effective resistance between the two points at ends of any diameter of circle?
3. How is a Voltmeter connected in the circuit to measure the potential difference between two points?
4. You have two metallic wires of resistances 6 ohm and 3 ohm. How will you connect these wires to get the effective resistance of 2 ohm?
5. State Ohm's law. "The resistance of a conductor is 1Ω ." What is meant by this statement?
6. Why are coils of electric toaster made of an alloy rather than a pure metal?
7. Why is the series arrangement not used for domestic circuits?
8. A wire of resistivity ' r ' is stretched to double its length. How does it affect the (a) resistance (b) resistivity?
9. Derive the equation for resultant resistance of Resistors in series
10. How much work is done in moving a charge of 3 coulomb from a point at the volts 115 to a point at 125 volts? [30j]

Chemistry

Chemical reactions and equations

- Q1 A metal nitrate A on heating gives a yellowish brown metal oxide along with a brown gas B and a colorless gas C. aqueous solution of A on reaction with potassium iodide forms a yellow precipitate of compound D .identify A,B,C and D
- Q2. Ferrous sulphate crystals decompose with the evolution of a gas with a characteristic smell of burning sulphur. Write the chemical reaction involved and the type of reaction.
- Q3. A solution of potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed. Write the type of chemical reaction and the corresponding balanced chemical equation.
- Q4. In a solution of copper sulphate, a strip of metal M was inserted. After sometime, the colour of copper sulphate solution faded away. Which metal is more reactive and which one is less? Give equation .Also mention the type of reaction.

Q5. Name one metal which can displace zinc from its salt solution and one metal which cannot displace zinc from its salt solution.

Q6. What happens when limestone is heated strongly? What type of reaction is this?

Q7. What happens when an aqueous solution of barium chloride is mixed with an aqueous solution of sodium sulphate? Write the equation also.

Q8. Give an example of a reaction which is both an exothermic and combination reaction.

Q9. Why does milkiness disappear when carbon dioxide is passed through lime water in excess?

Q10. Suggest any two observations in an activity which may suggest that a chemical reaction has taken place. Give example in support of your answer.

BIOLOGY

LIFE PROCESSES

Q1: a) Name the enzyme present in saliva?

b) What is emulsification?

Q2: State the three events that occur during the process of photosynthesis. Explain the role of stomata in the process.

Q3: Why do herbivores have longer, small intestine than carnivores?

Q4: Explain the process of digestion in mouth, stomach and small intestine in human body.

Q5: What is saliva? State its role in digestion of food.

Q6: Mention the raw materials required for photosynthesis.

Q7: Name the green dot like structures in some cells observed by a student when a leaf peel was viewed under a microscope. What is this green color due to?

Q8: What are the final products after digestion of carbohydrates and proteins?

Q9: Draw a diagram to show nutrition in Amoeba and label the parts used for this purpose. Mention any other purpose served by this part other than nutrition.

Q10: State the role of the following in human digestive system

a) Digestive enzymes b) hydrochloric acid c) villi