



**KENDRIYA VIDYALAYA ONGC MEHSANA**  
**HOLIDAYS HOME WORK CLASS -10**  
**SUB- SCIENCE**

**WRITTEN WORK:-Do it in file pages**

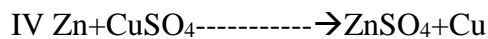
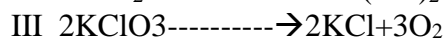
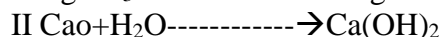
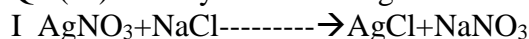
Q.1. Decomposition reaction required energy either in the form of heat or light or electricity for breakdown the reactants. Write one equation for each decomposition reaction where energy is supplied in the form of heat, light and electricity.

Q.2. What is observation when a solution of sodium sulphate is added to a solution of Barium chloride taken in a test tube? Write the equation for the chemical reaction involved and name the type of reaction in this case.

Q.3. In the reaction  $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$   
(a) Name the compound (i) oxidised (ii) reduced

Q.4 2g of silver chloride is taken in a china dish and then china dish is placed in sunlight for sometime. What will be your observation in this case? Write the chemical reaction involved in the form of balanced equation. Identify the type of reaction.

Q.5.(a.) Classify the following reaction into different types-



(b) Translate the following statement into balanced chemical equation

Barium chloride reacts with aluminum sulphate to give aluminum chloride and barium sulphate.

Q.6 What happens when  $\text{H}_2\text{S}$  gas is passed through a blue solution of copper sulphate.

Q.7 What happens when food materials containing fats and oils are left a long time? List two observable changes and suggest three ways by which this phenomenon can be prevented?

Q.8. How are water and minerals transported in plants?

Q.9. Draw a diagram of **human excretory system** and label following on it and write the answers of given questions.

(i) Form urine

(ii) Is a long tube that collects urine from kidney

(iii) Store urine until it is passed out.

a. Name the structural and functional unit of human excretory system.

b. Explain the structure of Neuron with the help of a label diagram/Name the basic unit present in kidney.

c. How is urine produced?

d. Name some waste products of plants other than  $\text{O}_2$  and  $\text{CO}_2$ .

Q.10 Draw the labeled diagrams of the following

1. Human Heart 2. Human digestive system 3. Nephron 4. Human respiratory system

**Practice for exam- (Learn)**

1. Chemical reactions and equations 2. Life process

**PORTFOLIO**

Complete your portfolio in given format (shared on whatsapp group)

## Case study questions

**Q1. Read the following and answer any four questions from (i) to (v).**

Heterotrophic nutrition is a mode of nutrition in which organisms obtain readymade organic food from outside sources. The organisms that depend upon outside sources for obtaining organic nutrients are called heterotrophs. Heterotrophic nutrition is of three types: saprophytic, parasitic and holozoic nutrition.

**(i) In which of the following groups of organisms food material is broken outside the body and absorbed?**

- (a) Mushroom, green plants, Amoeba (b) Yeast, mushroom, bread mould  
(c) Paramecium, Amoeba, Cuscuta (d) Cuscuta, lice, tapeworm

**(ii) Which of the following is a parasite?**

- (a) Yeast (b) Taenia (c) Amoeba (d) Earthworm

**(iii) Which of the following is an example of saprotroph?**

- (a) Grass (b) Mushroom (c) Amoeba (d) Paramecium

**(iv) Heterotrophic nutrition involves**

- (a) production of simple sugar from inorganic compounds  
(b) utilisation of chemical energy to prepare food  
(c) utilisation of energy obtained by plants  
(d) all of these.

**(v) In Amoeba, food is digested in**

- (a) mouth (b) pseudopodia (c) cilia (d) food vacuole

**Q2. Read the following and answer any four questions from (i) to (v).**

Rishaan experienced muscular cramps during the training session for his upcoming football match. Mr. Sen, his coach advised him on a schedule of some aerobic exercises to overcome his problem of muscular cramps. Rishaan followed his coach's advice and did not face the problem of muscular cramps again during his match



**(i) Which life process is depicted by the above passage?**

- (a) Respiration (b) Digestion (c) Nutrition (d) Excretion

**(ii) lack of oxygen in muscles often leads to cramps due to**

- (a) Conversion of pyruvate to ethanol (b) Conversion of glucose to pyruvate  
(c) Conversion of pyruvate to glucose (d) Conversion of pyruvate to lactic acid

**(iii) Is lactic acid produced by anaerobic respiration in yeast?**

- (a) YES (b) NO

**(iv) Why there is an increase in lactic acid concentration in the blood at the beginning of the exercise?**

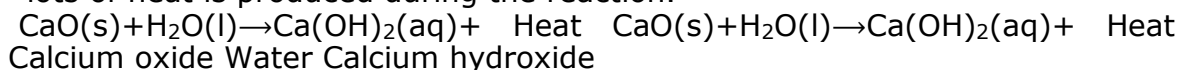
- (a) Lack of oxygen (b) Excess of oxygen (c) Lack of carbon dioxide (d) Excess of carbon dioxide

**(v) Is carbon dioxide produced by anaerobic respiration in yeast?**

- (a) YES (b) NO

**Q3. Read the following and answer any four questions from (i) to (v).**

A reaction in which two or more reactants combine to form a single product is called a combination reaction. For example, calcium oxide reacts vigorously with water to form calcium hydroxide. The reaction is highly exothermic in nature, as lots of heat is produced during the reaction.



Solution of  $\text{Ca(OH)}_2$  is used for white wash the walls. Calcium hydroxide reacts slowly with carbon dioxide in air to form a thin layer of calcium carbonate on the wall which gives a shiny appearance to wall. Calcium carbonate will form after two or three days of white wash.

(i) What is the chemical name of quick lime

- (a) Calcium oxide    (b) calcium carbonate    (c) calcium hydroxide    (d) carbon dioxide

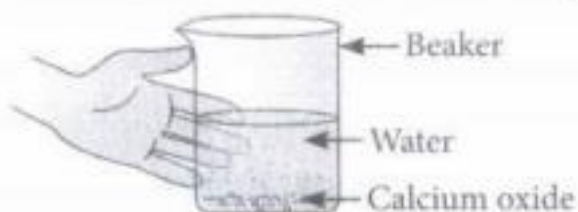
(ii) When carbon dioxide is passed through lime water

(a) calcium hydroxide is formed

(b) white precipitate of  $\text{CaO}$  is formed

(c) lime water turns milky    (d) colour of lime water becomes green.

(iii) Following observations are observed when calcium oxide reacts vigorously with water.



Identify the incorrect observations

(I) It is an endothermic reaction    (II) Slaked lime is produced.    (III) Quick lime is produced.    (IV) It is an exothermic reaction.    (V) It is a combination reaction

(a) (I) and (II)    (b) (III) and (IV)    (c) (I) and (III)    (d) (II), (IV) and (V)    (iv) Quick lime combines Vigorously with water to form (A) which reacts slowly with the carbon dioxide in air to form (B)

Identify the compounds(A) and (B)

(A) (B)

(a) Calcium carbonate    Calcium hydroxide

(b) Calcium hydroxide    Calcium carbonate

(c) Calcium    Calcium bicarbonate

(d) Calcium bicarbonate    Calcium

(v) Among the following, the endothermic reaction is

(a) combination of carbon and oxygen to form carbon monoxide

(b) combination of nitrogen and oxygen to form nitrogen monoxide    (c)

combination of glucose and oxygen to form carbon dioxide and water

(d) combination of zinc and hydrochloric acid to form zinc chloride and hydrogen

Q25. Reactions in which one element takes place of another element in a compound, are known as displacement reactions. In general, more reactive elements displaces a less reactive element from its compound. In all single displacement reactions, only one element displaces another element from its compound. The single displacement reactions are, however, written as just displacement reactions. The displacement reaction between iron (III) oxide and powdered aluminium produces so much heat that iron metal obtained is in molten form.

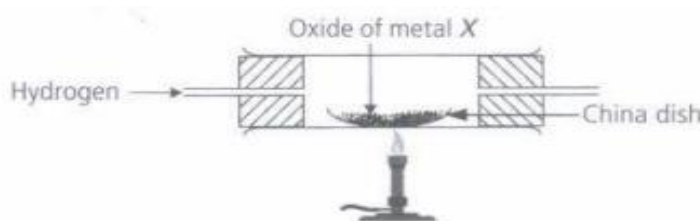
(i) Copper displaces which of the following metals from its salt solution?

(a)  $\text{ZnSO}_4$  (b)  $\text{FeSO}_4$  (c)  $\text{AgNO}_3$  (d)  $\text{NiSO}_4$

(ii) When zinc reacts with dilute sulphuric acid, the gas evolved is

- (a) red in colour and have a sweet smelling
- (b) green in colour and have a foul smell
- (c) colourless, odourless and burns with a pop sound
- (d) colourless, pungent smelling and burns with a pop sound

(iii) When dry hydrogen is passed over a heated oxide of metal X using the apparatus shown below, a reddishbrown residue is obtained



The reddish -brown residue could be

(a) copper (b) lead (c) silver (d) zinc

(iv) Which of the following reactions is a displacement reaction?

(a)  $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2$

(b)  $\text{Mg} + \text{CuSO}_4 \rightarrow \text{MgSO}_4 + \text{Cu}$

(c)  $\text{MgCO}_3 \rightarrow \text{Mg} + \text{CO}_2$

(d)  $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$

(v) When dilute hydrochloric acid is added to granulated zinc placed in a test tube, the observation made is

- (a) the surface of the metal turns shining
- (b) the reaction mixture turns milky
- (c) greenish yellow gas is evolved
- (d) the colourless and odourless gas evolves with a pop sound.

