



# SHIKSHA CLASSES

Sub. : Science  
Std. : X<sup>th</sup> - CBSE

## Question Paper

1. Chemical Reactions and Equations.

Marks : 30  
Time : 1 Hour.

### SECTION (A)

( Each - 1 Mark)

Q.1 : All the methods mentioned below can be used to prevent the food from getting rancid except :

- I) Storing the food in the air-tight containers.
  - II) Storing the food in refrigerator.
  - III) Keeping the food in clean and covered containers.
  - IV) Always touching the food with clean hands.
- a) (i) and (ii)                      b) (i) and (iii)                      c) (i), (iii) and (iv)                      d) (iii) and (iv)

OR

The respiration process during which glucose undergoes slow combustion by combining with oxygen in the cells of our body to produce energy, is a kind of :

- a) Exothermic process
- b) Endothermic process
- c) Reversible process
- d) Physical process

Q.2 : You are given the following chemical reaction.  $\text{CuO} + \text{H}_2 \xrightarrow{\text{Heat}} \text{Cu} + \text{H}_2\text{O}$ . Write the type of the reaction it represents.

OR

A chemical reaction does not involve :

- a) Formation of new substances having entirely different properties than that of the reactants.
- b) Breaking of old chemical bonds and formation of new chemical bonds.
- c) Rearrangement of the atoms of reactants to form new products.
- d) Changing of the atoms of an element into of another element to form new products.

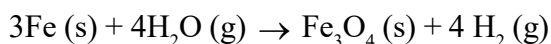
**For question number 3 to 5 two statement are given one labeled Assertion (A) and other labeled Reason (R) select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below**

- a) Both A and R are true and R is correct explanation of the assertion.
- b) Both A and R are true but R is not the correct explanatoin of the assertion.
- c) A is true but R is false.
- d) A is false but R is true.



balancing

Q.12 : Which of the following statements about the given reaction are correct?



- i) Iron metal is getting oxidized                      ii) Water is getting reduced  
iii) Water is acting as reducing agent              iv) Water is acting as oxidising agent  
(a) (i), (ii) and (iii)    (b) (i) and (iv)    (c) (i), (ii) and (iv)    (d) (ii) and (iv)

Q.13 : The process of reduction involves

- (a) addition of oxygen                                      (b) addition of hydrogen  
(c) removal of oxygen                                      (d) none of these

Q.14: Which of the following is a displacement reaction?

- (a)  $\text{MgCO}_3 \rightarrow \text{MgO} + \text{CO}_2$                               (b)  $2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$   
(c)  $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$                                       (d)  $2\text{Pb}(\text{NO}_3)_2 \xrightarrow{\text{Heat}} 2\text{PbO} + 4\text{NO}_2 + \text{O}_2$

**SECTION (B)**

**(Each - 2 Mark)**

Q.15 : Why a combustion reaction is an oxidation reaction?

**OR**

: What do you mean by a precipitation reaction? Explain by giving examples.

Q.16 : Balance the following equation stepwise  $\text{Ag} + \text{HCl} \longrightarrow \text{AgCl} \downarrow + \text{H}_2 \uparrow$

**SECTION (C)**

**(Each - 3 Mark)**

Q.17 : What is the colour of copper sulphate solution? What happens when iron nail is dipped in it?

**OR**

: Explain redox reaction with the help of an example.

Q.18 : Write the balanced chemical reactions for the following reaction.

- i) Process of photosynthesis.  
ii) Electric current is passed through water.  
iii) Ammonia and hydrogen chloride gases are mixed.

**SECTION (D)**

**(5 Mark)**

Q.19 : a) Define a balanced chemical equation. Why should an equation be balanced?

b) Write the balanced chemical equation for the following reaction :

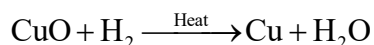
I) Phosphorus burns in presence of chlorine to form phosphorus pentachloride.

II) Burning of natural gas.

III) the process of respiration.

**OR**

Consider the chemical equation given below and answer the question that follow.



- i) Name the substance which is getting oxidised.  
ii) Name the oxidising agent.    iii) Name the substance which is getting reduced.  
iv) Name the reducing agent.    iv) What type of a reaction does this equation represent?

\* \* \*

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