Practice Questions - Term I

Date: 21/11/2021

Subject: Chemistry

Topic : Chemical Reactions and Equations

Class: X

---

1. In electrolysis of water (acidified), the gases that are evolved at anode and cathode respectively are _____ and _____.

   A. hydrogen and oxygen

   B. oxygen and hydrogen

   C. hydrogen and chlorine

   D. chlorine and oxygen

2. What will be the values of the coefficients x, y and z if the given reaction is balanced?

   $\mathrm{xFeCl_3 + yMgO \rightarrow Fe_2O_3 + zMgCl_2}$

   A. x = 2, y = 3, z = 3

   B. x = 2, y = 4, z = 3

   C. x = 3, y = 2, z = 2

   D. x = 3, y = 2, z = 3

3. When carbon dioxide gas is passed through lime water,

   A. calcium hydroxide is formed.

   B. white precipitate of CaO is formed.

   C. white precipitate of $\mathrm{CaCO_3}$ is formed.

   D. colour of lime water disappears.

4. $3\mathrm{MnO_2}(s) + 4\mathrm{Al}(s) \rightarrow 3\mathrm{Mn}(s) + 2\mathrm{Al_2O_3}(s)$

In the above reaction, the oxidising agent is:

A. $\mathrm{MnO_2}$

B. Al

C. $\mathrm{Al_2O_3}$

D. Mn

5. Estimate the value x to balance the given equation.

$Mg_3N_2\ (aq) + xH_2O\ (l) \rightarrow 3Mg(OH)_2\ (aq) + 2NH_3\ (g)$

A. 2

B. 4

C. 6

D. 8

6. Beakers A, B, and C contain zinc sulphate, silver sulphate, and ferrous sulphate solutions respectively. Copper filings are added to each beaker. Blue colour will appear in which of the following beakers?

A. Beaker A

B. Beaker B

C. Beaker C

D. All the beakers

Practice Questions - Term I

7. In an experiment, 15 g of a compound X is heated in a closed glass container to give compounds Y and Z. The total mass of the compounds Y and Z is _____ g.

   A. 15

   B. 30

   C. 7.5

   D. 10

8. Carbon reacts with oxygen to give carbon dioxide. This is an example of:

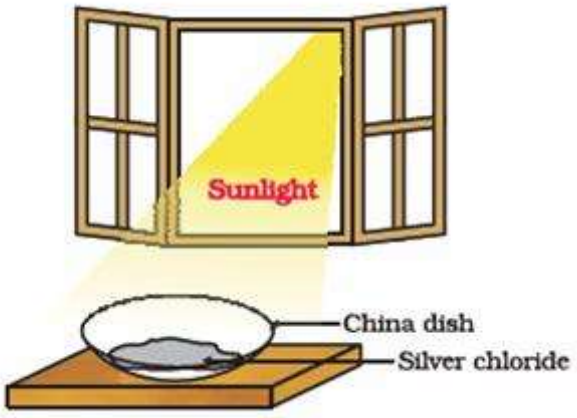
   A. Displacement reaction

   B. Double displacement reaction

   C. Decomposition reaction

   D. Combination reaction

9. Identify the type of chemical reaction taking place when silver chloride turns black on exposure to sunlight.



   A. Decomposition reaction

   B. Displacement reaction

   C. Combination reaction

   D. Double displacement reaction

10. **Assertion(A)**: Photosynthesis is an endothermic reaction.
Reason(R): Energy gets released in the process of photosynthesis.

    A. Both A and R are true and R is the correct explanation of A.

    B. Both A and R are true and R is the not the correct explanation of A.

    C. A is true but R is false.

    D. A is false but R is true.

11. **Assertion(A)**: The balancing of chemical equations is based on the law of conservation of mass.
Reason(R): Total mass of reactants is equal to the total mass of products.

    A. Both A and R are true and R is the correct explanation of A.

    B. Both A and R are true and R is the not the correct explanation of A.

    C. A is true but R is false.

    D. A is false but R is true.

12. On adding a white solid ‘X’ to water, a hissing sound is heard and a lot of heat is produced along with the formation a product ‘Y’.
The solution of ‘Y’ is applied on the walls of buildings during whitewashing. It reacts with carbon dioxide in air to form 'Z'. This Z gives a shiny finishing to the walls after 2-3 days of whitewashing.

    (i) The chemical formula of solid ‘X’ is _____.

    A. MgO

    B. $CaCO_3$

    C. CaO

    D. $Ca(OH)_2$

13. On adding a white solid ‘X’ to water, a hissing sound is heard and a lot of heat is produced along with the formation a product ‘Y’.
The solution of ‘Y’ is applied on the walls of buildings during whitewashing. It reacts with carbon dioxide in air to form 'Z'. This Z gives a shiny finishing to the walls after 2-3 days of whitewashing.

(ii) The chemical formula of the product Y is _____.

A. $Ca(OH)_2$

B. $CaCO_3$

C. $CaSO_4.1/2\ H_2O$

D. $CaSO_4.\ 2H_2O$

14. On adding a white solid ‘X’ to water, a hissing sound is heard and a lot of heat is produced along with the formation a product ‘Y’.
The solution of ‘Y’ is applied on the walls of buildings during whitewashing. It reacts with carbon dioxide in air to form 'Z'. This Z gives a shiny finishing to the walls after 2-3 days of whitewashing.

(iv) The chemical formula of product Z is _____.

A. $MgCO_3$

B. Na_2CO_3

C. $CaCO_3$

D. $NaHCO_3$

15. **Assertion (A):** Magnesium displaces aluminium from its salt solution.
Reason (R): Magnesium is more reactive than aluminium.

A. Both A and R are true and R is the correct explaination of A.

B. Both A and R are true and R is the not the correct explaination of A.

C. A is true but R is false.

D. A is false but R is true.

16. On adding a white solid ‘X’ to water, a hissing sound is heard and a lot of heat is produced along with the formation a product ‘Y’.
The solution of ‘Y’ is applied on the walls of buildings during whitewashing. It reacts with carbon dioxide in air to form 'Z'. This Z gives a shiny finishing to the walls after 2-3 days of whitewashing.

(iii) Formation of Y in this case is an example of _____ reaction.

A. displacement

B. decomposition

C. combination

D. redox