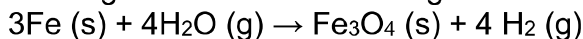


CHEMICAL REACTIONS & EQUATIONS

MCQ

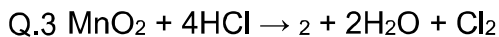
Q.1 Which of the following statements about the given reaction are correct?



- (i) Iron metal is getting oxidised
- (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) (in) and (iv)
- (c) (i), (ii) and (iv)
- (d) (ii) and (iv)

Q.2 Which of the following are exothermic processes?

- (i) Reaction of water with quick lime
- (ii) Dilution of an acid
- (iii) Evaporation of water
- (iv) Sublimation of camphor (crystals)
- (a) (i) and (ii)
- (b) (ii) and (iii)
- (c) (i) and (iv)
- (d) (ii) and (iv)

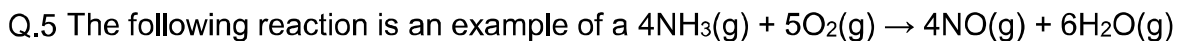


Identify the substance oxidized in the above. equation.

- (a) MnCl_2
- (b) HCl
- (c) H_2O
- (d) MnO_2

Q.4 Electrolysis of water is a decomposition reaction. The mole ratio of hydrogen and oxygen gases liberated during electrolysis of water is:

- (a) 1: 1
- (b) 2:1
- (c) 4:1
- (d) 1:2



- (i) displacement reaction
- (ii) combination reaction
- (iii) redox reaction
- (iv) neutralisation reaction
- (a) (i) and (iv)
- (b) (ii) and (iii)
- (c) (i) and (iii)
- (d) (iii) and (iv)

Q.6 Barium chloride on reacting with ammonium sulphate forms barium sulphate and ammonium chloride. Which of the following correctly represents the type of the reaction involved?

- (i) Displacement reaction
- (ii) Precipitation reaction
- (iii) Combination reaction
- (iv) Double displacement reaction
- (a) (i) only
- (b) (ii) only
- (c) (iv) only
- (d) (ii) and (iv)

Q.7 What type of chemical reactions take place when electricity is passed through water?

- (a) Displacement
- (b) Combination
- (c) Decomposition
- (d) Double displacement

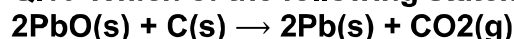
Q.8 Name the products formed when iron filings are heated with dilute hydrochloric acid

- (a) Fe (III) chloride and water
- (b) Fe (II) chloride and water
- (c) Fe (II) chloride and hydrogen gas
- (d) Fe (III) chloride and hydrogen gas

Q.9 When green colored ferrous sulphate crystals are heated, the color of the crystal changes because

- (a) it is decomposed to ferric oxide
- (b) it loses water of crystallization
- (c) it forms SO_2
- (d) it forms SO_3

Q.10 Which of the following statements about the reaction below are incorrect?



- 1. Lead is getting reduced.
- 2. Carbon dioxide is getting oxidized.
- 3. Carbon is getting oxidized.
- 4. Lead oxide is getting reduced.
- (a) 1 and 2
- (b) 1 and 3
- (c) 1, 2 and 3
- (d) all of the above

Q.11 Before burning in air, the magnesium ribbon is cleaned by rubbing with a sand paper to:

- (a) Make the ribbon surface shinier
- (b) Remove the layer of magnesium oxide from the ribbon surface
- (c) Remove the dust from the ribbon surface

(d) Remove the moisture from the ribbon surface.

Q.12 One of the following is an endothermic reaction.

- (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

Q.13 On heating a blue coloured powder of copper (ii)nitrate in a boiling tube, copper oxide (black) oxygen gas and a brown gas x is formed. Identify to brown gas x.

- (a) Nitrogen oxide
- (b) Nitrogen di oxide
- (c) Nitrogen tri oxide
- (d) Hydrogen

Q.14 What is observed when a solution of potassium iodide is added to silver nitrate solution?

- (a) No reaction takes place
- (b) White precipitate of silver iodide is formed
- (c) yellow precipitate of AgI is formed
- (d) AgI is soluble in water.

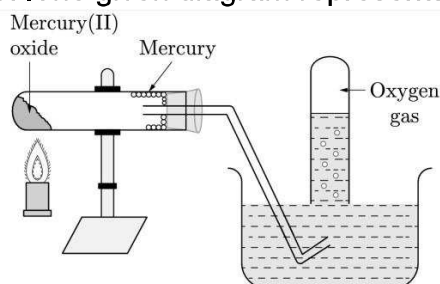
Q.15 Lead nitrate $Pb(NO_3)_2$ on heating forms Lead oxide (PbO) solid and Nitrogen dioxide gas. What are the colour of lead oxide and nitrogen dioxide?

- (a) White, Colourless
- (b) White, Brown
- (c) Yellow, Brown
- (d) Yellow, Colourless

Q.16 A chemical reaction does not involve:

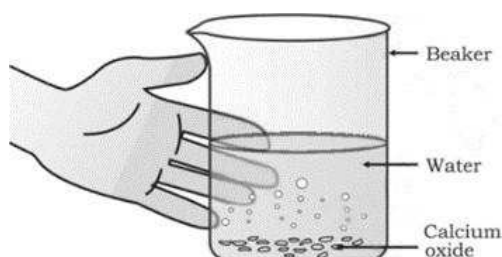
- (a) Formation of new substances having entirely different properties than that of the reactants
- (b) Breaking of old chemical bonds and formation of new chemical bonds
- (c) Rearrangement of the atoms of reactants to form new products
- (d) Changing of the atoms of one element into those of another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

17. The given diagram represents a..... reaction.



- (a) Thermal decomposition
- (b) Displacement
- (c) Double displacement
- (d) Combination

18. Calcium oxide reacts vigorously with water



Identify the incorrect statements.

1. It is an endothermic reaction.
2. Slaked lime is produced.
3. Quick lime is produced.
4. It is an exothermic reaction.
5. It is a combination reaction

- (a) 1 and 2 (b) 3 and 4 (c) 1 and 3 (d) 2, 4 and 5

19. Which reaction is used in photography?

- (a) $\text{CaO} + \text{H}_2\text{O} \longrightarrow \text{Ca}(\text{OH})_2 + \text{Heat}$
 (b) $2\text{FeSO}_4 \xrightarrow{\text{Heat}} \text{Fe}_2\text{O}_3 + \text{SO}_2 + \text{SO}_3$
 (c) $2\text{Cu} + \text{O}_2 \longrightarrow 2\text{CuO}$
 (d) $2\text{AgBr} \xrightarrow{\text{sunlight}} 2\text{Ag} + \text{Br}$

20. A substance 'X' is used in white-washing and is obtained by heating limestone in the absence of air. Identify 'X'.

- (a) CaOCl_2
 (b) $\text{Ca}(\text{OH})_2$
 (c) CaO
 (d) CaCO_3

ASSERTION-REASON QUESTION

Following questions consist of two statements – Assertion (A) and Reason (R).

Answer these questions selecting the appropriate option given below:

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

Q.1. Assertion (A): Decomposition of vegetable matter into compost is an example of exothermic reactions.

Reason (R): Exothermic reaction are those reactions in which heat is evolved.

Q.2. Assertion (A): Calcium carbonate when heated gives calcium oxide and water.

Reason (R): On heating calcium carbonate, decomposition reaction takes place.

Q.3. Assertion (A): Brown fumes are produced when lead nitrate is heated.

Reason (R): Nitrogen dioxide gas is produced as a by-product due to the decomposition of lead nitrate.

Q.4. Assertion (A): White silver chloride turns grey in sunlight.

Reason (R): Decomposition of silver chloride in presence of sunlight takes place to form silver metal and chlorine gas.

Q.5. Assertion (A): AgBr is used on photographic and X-ray film.

Reason (R): AgBr is photosensitive and changes to Ag and bromine in presence of sunlight and undergoes decomposition reaction.

Q.6. Assertion (A): In a balanced chemical equation, total mass of the reactants is equal to the total mass of the products.

Reason (R): Mass can neither be created nor destroyed during a chemical change.

Q.7. Assertion (A): In a reaction of copper with oxygen, copper serves as a reducing agent.

Reason (R): The substance which gains oxygen in a chemical reaction act as a reducing agent.

Q.8. Assertion (A): Pungent smelling gas is produced when sulphur burns in air.

Reason (R): Sulphur trioxide is formed on reaction of sulphur with oxygen.

Q9. Assertion : Zinc reacts with sulphuric acid to form zinc sulphate and hydrogen gas and it is a displacement reaction.

Reason : Zinc reacts with oxygen to form zinc oxide.

Q10. Assertion: Photosynthesis is an endothermic reaction.

Reason : Energy gets released in the process of photosynthesis.

ANSWERS

MCQ

1-(c), 2-(a), 3-(d), 4-(b), 5-(c), 6-(d), 7-(c), 8-(d), 9-(b), 10-(a), 11-(b), 12-(b), 13-(b), 14-(c), 15-(c), 16-(d), 17-(a), 18-(c), 19-(d), 20-(a)

ASSERTION- REASON

1-(a), 2-(d), 3-(a), 4-(a), 5-(a), 6-(a), 7-(a), 8-(c), 9-(b), 10-(c)