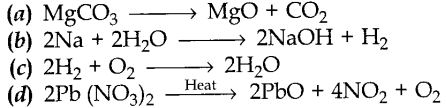
MCQs Chapter 1 Chemical Reactions and Equations

1. Which of the following is a displacement reaction?  


**Answer/ Explanation**

2. Magnesium ribbon is rubbed before burning because it has a coating of  
(a) basic magnesium carbonate  
(b) basic magnesium oxide  
(c) basic magnesium sulphide  
(d) basic magnesium chloride

**Answer**

3. Which of the following statements about the given reaction are correct?  
3Fe (s) + 4H2O (g) → Fe3O4 (s) + 4 H2 (g)  
(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), (zi) and (iii)  
(b) (in) and (iv)  
(c) (i), (ii) and (iv)  
(d) (ii) and (iv)

**Answer**

4. 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)

**Answer/ Explanation**

5. Oxidation is a process which involves  
(a) addition of oxygen  
(b) addition of hydrogen  
(c) removal of oxygen  
(d) removal of hydrogen

**Answer**

6. The process of reduction involves  
(a) addition of oxygen  
(b) addition of hydrogen  
(c) removal of oxygen  
(d) removal of hydrogen

**Answer**

7. Three beakers labelled as A, B and C each containing 25 ml of water were taken. A small amount of NaOH, anhydrous CuSO4 and NaCl were added to the beakers A, B and C respectively. It was observed that there was an increase in the temperature of the solution contained in beakers A and B, whereas in case of beaker C, the temperature of the solution falls. Which one of the following statement(s) is (are) correct?  
(i) In beakers A and B, exothermic process has occurred.  
(ii) In beakers A and B, endothermic process has occuBftd.  
(iii) In beaker C exothermic process has occurred.  
(iv) In beaker C endothermic process has occurred.  
(a) (i) only  
(b) (ii) only  
(c) (i) and (iv)  
(d) (iv), (ii) and (iii)

**Answer**

8. Give the ratio in which hydrogen and oxygen are present in water by volume.  
(a) 1:2  
(b) 1:1  
(c) 2:1  
(d) 1:8

**Answer**

9. Which among the following statement(s) is (are) true?  
Exposure of silver chloride to sunlight for a long duration turns grey due to

(i) the formation of silver by decomposition of silver chloride  
(ii) sublimation of silver chloride  
(iii decomposition of chlorine gas from silver chloride  
(iv) oxidation of silver chloride  
(a) (i) only  
(b) (i) and (iii)  
(c) (ii) and (iii)  
(d) (iv) only

**Answer**

10. MnO2 + 4HCl → 2 + 2H2O + Cl2  
Identify the substance oxidized in the above . equation.  
(a) MnCl2  
(b) HCl  
(c) H2O  
(d) MnO2

**Answer/ Explanation**

11. A substance ‘X’ is used in white-washing and is obtained by heating limestone in the absence of air. Identify ‘X’.  
(a) CaOCl2  
(b) Ca (OH)2  
(c) CaO  
(d) CaCO3

**Answer/ Explanation**

12. When Ag is exposed to air it gets a black coating of  
(a) AgNO3  
(b) Ag2S  
(c) Ag2O  
(d) Ag2CO3

**Answer**

13. Which of the following is an endothermic process?  
(a) Dilution of sulphuric acid  
(b) Sublimation of dry ice  
(c) Condensation of water vapours  
(d) Respiration in human beings

**Answer**

14. In the double displacement reaction between aqueous potassium iodide and aqueous lead nitrate, a yellow precipitate of lead iodide is formed. While performing the activity if lead nitrate is not available, which of the following can be used in place of lead nitrate?  
(a) Lead sulphate (insoluble)  
(&) Lead acetate  
(c) Ammonium nitrate  
(d) Potassium sulphate

**Answer**

15. What type of chemical reactions take place when electricity is passed through water?  
(a) Displacement  
(b) Combination  
(c) Decomposition  
(d) Double displacement

**Answer/ Explanation**

16. Select the oxidising agent for the following reaction:  
H2S + I2 > 2HI + S  
(a) I2  
(b) H2S  
(C) HI  
(d) S

**Answer**

17. A substance added to food containing fats and oils is called:  
(a) Oxidant  
(b) Rancid  
(c) Coolant  
(d) Antioxidant

**Answer**

18. The condition produced by aerial oxidation of fats and oils in foods marked by unpleasant smell and taste is called:  
(a) antioxidation  
(b) reduction  
(c) rancidity  
(d) corrosion

**Answer**

19. 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

**Answer**

20. When S02 gas is passed through saturated solution of H2S, which of the following reaction occurs?  
(a) SO2 + 2H2S → 2H20 + 3S  
(b) SO2 + 2H2S → H20 + 3S  
(c)SO2 + H2S → H2O + S  
(d) SO2 + H2O → SO3 + H2

**Answer**

21. 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

**Answer/ Explanation**

22. Pb + CuCl2 → PbCl2 + Cu  
The above reaction is an example of:  
(a) combination  
(b) double displacement  
(c) decomposition  
(d) displacement

**Answer**

23. Which of the following gases can be used for storage (a) Carbon dioxide or Oxygen  
(b) Nitrogen or Oxygen  
(c) Carbon dioxide or Helium  
(d) Helium or Nitrogen

**Answer**

24. A dilute ferrous sulphate solution was gradu¬ally added to the beaker containing acidified permanganate solution. The light purple colour of the solution fades and finally disap¬pears. Which of the following is the correct explanation for the observation?  
(a) KMnO4 is an oxidising agent, it oxidises FeSO4.  
(b) FeSO4 acts as an oxidising agent and oxidises KMNO4.  
(c) The colour disappears due to dilution; no reaction is involved.  
(d) KMnO4 is an unstable compound and de-composes in presence of FeSO4. to a colourless compound.

**Answer**

25. In which of the following chemical equations, the abbreviations represent the correct states of the reactants and products involved at reaction temperature?  
(a) 2H2 (l) + O2 (l) > 2H2O(g)  
(b) 2H2 (g) + O2 (l) > 2H2O (l)  
(c) 2H2 (g) + O2 (g) > 2H2O (l)  
(d) 2H2 (g) +O2 (g) > 2H2O (g)

**Answer**

Fill in the Blanks

1. The addition of oxygen to a substance is called …………. whereas removal of oxygen is called …………. .  
2. The addition of hydrogen to a substance is called …………. whereas removal of hydrogen is called …………. .  
3. Precipitation reactions produce insoluble …………. .  
4. Reactions in which energy is given out are known as …………. .  
5. Reaction in which an element displaces another element from its compound is called …………. .  
6. Two antioxidants which are usually added to fat and oil containing foods to prevent rancidity, are …………., …………. .  
7 …………. is the process in which metals are eaten up gradually by the action of air, moisture or a chemical on  
their surface.  
8. 2 FeSO4 → Fe2O3 + SO2 + ………….  
9. Na2SO4 + BaCl2 → …………. + 2NaCl  
10. Complete the missing components/variables given as x and y in the following reactions:  
(a) Pb (NO3)2 (aq) + 2KI (aq) → Pbl2 (x) + 2KNO3 (y)  
(b) Cu (s) + 2AgNO3 (aq) → Cu (NO3)2 (aq) + x (s)

Answers

1. oxidation, reduction  
2. reduction, oxidation  
3. salts  
4. exothermic reactions  
5. displacement reaction  
6. BHA and BHT  
7. Corrosion  
8. SO3  
9. BaSO4  
10. (a) x → (s); y → (aq);  
(b) x → 2Ag