QB365 Question Bank Software Study Materials

Types of Chemical Reactions 50 Important 1 Marks Questions With Answers (Book Back and Creative)

10th Standard

Science

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

1) $H_{2(g)} + Cl_{29(g)} \rightarrow 2HCl_{(g)}$ is a

(a) Decomposition Reaction **(b) Combination Reaction** (c) Single Displacement Reaction

(d) Double Displacement Reaction

2) Photolysis is a decomposition reaction caused by _____

(a) heat (b) electricity **(c) light** (d) mechanical energy

3) A reaction between carbon and oxygen is represented by $C_{(s)} + O_{2(g)} \rightarrow CO_{2(g)}$ + Heat. In which of the type(s), the above reaction can be classified?

(i) Combination Reaction

(ii) Combustion Reaction

(iii) Decomposition Reaction

(iv) Irreversible Reaction

(a) i and ii (b) i and iv (c) i, ii and iii **(d) i, ii and iv**

4) The chemical equation $Na_2SO_{4(aq)} + BaCl_{2(aq)} \rightarrow BaSO_{4(s)}\downarrow + 2NaCl_{(aq)}$ represents which of the following types of reaction?

(a) Neutralisation (b) Combustion **(c) Precipitation** (d) Single displacement

5) Which of the following statements are correct about a chemical equilibrium?

(i) It is dynamic in nature

(ii) The rate of the forward and backward reactions are equal at equilibrium

(iii) Irreversible reactions do not attain chemical equilibrium

(iv) The concentration of reactants and products may be different

(a) i, ii and iii (b) i, ii and iv (c) ii, iii and iv (d) i, iii and iv

6) A single displacement reaction is represented by $X_{(s)} + 2HCl_{(aq)} \rightarrow XCl_{2(aq)} + H_{2(g)}$. Which of the following(s) could be X. (i) Zn (ii) Ag (iii) Cu (iv) Mg. Choose the best pair.

(a) i and ii (b) ii and iii (c) iii and iv **(d) i and iv**

7) Which of the following is not an"element + element → compound" type reaction?

(a) $C_{(s)} + O_{2(g)} \rightarrow CO_{2(g)}$ (b) $2K_{(s)} + Br_{2(l)} \rightarrow 2KBr_{(s)}$ **(c) $2CO_{(g)} + O_{2(g)} \rightarrow 2CO_{2(g)}$** (d) $4Fe_{(s)} + 3O_{2(g)} \rightarrow 2Fe_2O_{3(s)}$

8) Which of the following represents a precipitation reaction?

(a) $A_{(s)} + B_{(s)} \rightarrow C_{(s)} + D_{(s)}$ (b) $A_{(s)} + B_{(aq)} \rightarrow C_{(aq)} + D_{(l)}$ **(c) $A_{(aq)} + B_{(aq)} \rightarrow C_{(s)} + D_{(aq)}$** (d) $A_{(aq)} + B_{(s)} \rightarrow C_{(aq)} + D_{(l)}$

9) The pH of a solution is 3. Its $[OH^-]$ concentration is

(a) 1×10^{-3} M (b) 3M **(c) 1×10^{-11} M** (d) 11 M

10) Powdered $CaCO_3$ reacts more rapidly than flaky $CaCO_3$ because of _____.

(a) large surface area (b) high pressure (c) high concentration (d) high temperature

11) The product formed when calcium oxide reacts with water is

(a) Slaked lime (b) Carbon dioxide (c) Calcium oxide (d) Oxygen gas

12) The reaction between hydrogen and oxygen gas to form water is _____ reaction.

(a) combination (b) redox (c) exothermic (d) all of these

13) Formation of ammonia from nitrogen and hydrogen is an example of _____ reaction.

(a) Thermal decomposition **(b) Combination** (c) Precipitation (d) Displacement

14) Pick out a chemical reaction which is not feasible

(a) $2NaCI \longrightarrow 2Na + Cl_2$ (b) $2NaCI + F \longrightarrow 2NaF + Cl_2$ **(c) $2NaF + Cl_2 \longrightarrow 2NaCI + F$** (d) $NaOH + HCI \longrightarrow NaCl + H_2O$

15) $Pb(NO_3)_2 + 2KI \longrightarrow PbI_2 + 2KNO_3$ is a _____ reaction

(a) neutralization **(b) Precipitation** (c) decomposition (d) Combustion

16) Which among the following is not a balanced equation?

(a) $Fe + Cl_2 \longrightarrow FeCl_3$ (b) $Zn + S \rightarrow ZnS$ (c) $CaCO_3 \rightarrow CaO + CO$ (d) $Fe + CuSO_4 \longrightarrow FeSO_4 + Cu$

17) Ionic product of water is expressed

(a) $K_w = [Hp^+] [OH^-]$ (b) $K_w = [H^+] [OH^-]$ **(c) both (a) and (b)** (d) neither (a) nor (b)

18) Chemically rust is

(a) hydrated ferrous oxide (b) Ferrous oxide **(c) hydrated ferric oxide** (d) Ferric oxide

19) Hydrogen gas combines with Chlorine gas to form _____gas.

(a) Hydrogen chloride gas (b) Hydrogen and chlorine (c) Hydrogen chloric acid (d) Hydro chloric acid

20) Compound + Compound — > _____.

(a) Element (b) Compound (c) element or compound (d) compound or element

21) A+B -— > AB.

(a) Decomposition reaction (b) Precipitation reaction (c) Double decomposition reaction (d) None

22) A solution of _____ is used for white washing walls.

(a) Calcium carbonate (b) Calcium hydroxide (c) Calcium chloride (d) None

23) Thermal decomposition reaction is also called as _____.

(a) Exothermic reaction **(b) Endothermic reaction** (c) Entrophy (d) None of the above

24) $Fe + CuSO_4$ — $FeSO_4 + Cu$. This type of reaction is _____.

(a) Decomposition reaction (b) Combination reaction **(c) Displacement reaction** (d) Double displacement reaction

25) Doube displacement reaction is also called as _____.

(a) Thermolysis reaction (b) Metathesis reaction **(c) Photolysis reaction** (d) None

26) Ions are exchanged in this reactions. What type of reaction takes place?

(a) Decompositon reaction (b) Combination reaction **(c) Double displacement reaction**

(d) Single displacement reaction

27) $Pb(NO_3)_2 + 2KI$ — > $PbI_2 + KNO_3$. It is an example of _____ reaction.

(a) Combination reaction (b) Decomposition reaction **(c) Precipitation reaction** (d) Displacement reaction

28) Acid + Base — > Salt + Water.

(a) Decomposition reaction (b) Combination reaction **(c) Neutralisation reaction** (d) None

29) Combustion reactions otherwise called as _____.

(a) Decomposition reaction (b) Combination reaction (c) Neutralisation reaction **(d) Exothermic reaction**

30) Physical changes are called as _____.

(a) Reversible reaction (b) Irreversible reaction (c) Periodic (d) Non-periodic

31) AB < ——— > A + B, This type of chemical reaction is _____.

(a) Reversible (b) Irreversible (c) either a or b (d) None of the above

32) The reaction that cannot be reversed is called _____ reaction.

(a) Reversible **(b) Irreversible** (c) either a or b (d) None of the above

33) Hydrogen peroxide is poured on a wound. It decomposes into _____ and _____.

(a) water and oxygen (b) water and oxides (c) hydrogen and oxygen (d) none of the above

34) Rusting of Iron is an example of _____ reaction.

(a) slow (b) fast (c) either a or b (d) neither a nor b

35) Burning of petrol is an example of _____ reaction.

(a) slow **(b) fast** (c) intermediate (d) can't be specified

36) Powdering of the reactants _____ the surface area and more energy produced.

(a) increases (b) decreases (c) no change (d) can't be specified

37) MnO_2 acts as a _____.

(a) Catalyst (b) Dehydrating agent (c) hydrating agent (d) solvent

38) At this state, the volume of the liquid and gaseous phases remain constant. Since it is a physical change, the equilibrium attained is called _____ equilibrium.

(a) physical (b) chemical (c) mechanical (d) none

39) Pure water is _____ of electricity.

(a) poor conductor (b) good conductor (c) either a or b (d) none

40) _____ ionisation is a reaction in which two like molecules react to give ions.

(a) Self (b) Unautomatic (c) catalytic (d) none

41) _____ formed is a strong acid and the _____ ion is a strong base.

(a) hydronium ion, hydroxyl ion (b) hydroxyl ion, hydronium ion (c) both a and b (d) none

42) The unit of ionic product of water is _____.

(a) mol^2dm^{-6} (b) mol^3dm^{-3} (c) $mol^{-2}dm^{-6}$ (d) mol^3dm^{-3}

43) Acids have pH less than _____.

(a) 7 (b) 8 (c) 9 (d) 10

44) Bases have pH greater than _____.

(a) 7 (b) 8 (c) 9 (d) 10

45) PH of rain water is _____.

(a) 7 (b) 8 (c) 9 (d) 10

46) pH of blood is ranging _____.

(a) 7.35 to 7.45 (b) 7.45 to 7.55 (c) 7.25 to 7.35 (d) none

47) The pH of the stomach fluid is approximately _____.

(a) 2.0 (b) 2.1 (c) 2.5 (d) 2.4

48) The term pH means power of _____.

(a) Hydrogen (b) Hydroxyl (c) both (d) none

49) A substance which alters the rate of reaction without undergoing any change its mass and composition is known as

(a) Reactants (b) Products (c) Rate of reaction **(d) Catalyst**

50) In a combustion reaction.

(a) oxygen gas is rleased (b) nitrogen gas is relcased **(c) oxygen gas is utilised** (d) nitrogen gas is utiliscd