**THE ASIAN SCHOOL, DEHRADUN**
**MULTIPLE CHOICE QUESTIONS 2019**
**CHEMISTRY CLASS – XII CHAPTER- 1 CHEMICAL REACTIONS AND EQUATIONS**

Q1: Which of the following is not a decomposition reaction?
(a) $CaCO_3 \rightarrow CaO + CO_2$
(b) $H_2 + Cl_2 \rightarrow 2HCl$
(c) $H_2CO_3 \rightarrow H_2O + CO_2$
(d) $2KClO_3 \rightarrow 2KCl + 3O_2$

Q2: Which of the following is not an oxidising agent?
(a) Oxygen
(b) Conc. Sulphuric acid
(c) Chlorine
(d) Hydrogen

Q3: The oxidation reaction which produces heat and light is
(a) endothermic
(b) photochemical
(c) combustion
(d) exothermic

Q4: $2Pb(NO_3)_2 \rightarrow 2PbO + nA + O_2$ What is nA in the given reaction?
(a) 4NO
(b) $4NO_2$
(c) $2PbNO_2$
(d) $NO_2$

Q5: A slow combustion in which glucose present in the body cells combine with oxygen to provide energy is
(a) digestion
(b) excretion
(c) respiration
(d) none of the above

Q6: The equation $Cu + XHNO_3 \rightarrow Cu(NO_3)_2 + YNO_2 + 2H_2O$, the value of X and Y are
(a) 3 and 1 respectively
(b) 8 and 6 respectively
(c) 4 and 2 respectively
(d) 7 and 1 respectively

Q7: When the gases sulphur dioxide and hydrogen sulphide mix in the presence of water, the reaction $SO_2 + 2H_2S \rightarrow 2H_2O + 3S$ occurs. Here hydrogen sulphide is acting as
(a) an oxidising agent
(b) a reducing agent
(c) a dehydrating agent
(d) a catalyst

Q8: What is the chemical name of quick lime ?
(a) Calcium oxide
(b) Calcium carbonate
(c) Calcium hydroxide
(d) Carbon dioxide

Q9:Which of the following reaction will not take place?
(a) $Zn + FeSO_4 \rightarrow ZnSO4 + Fe$
(b) $2KI + Cl_2 \rightarrow 2KCl + I2$
(c) $Zn + MgSO_4 \rightarrow ZnSO_4 + Mg$
(d) $Mg + CuSO_4 \rightarrow MgSO_4 + Cu$

Q10: In the reaction, $2FeCl_2 + Cl_2 \rightarrow 2FeCl3$ , chlorine may be regarded as
(a) an oxidizing agent
(b) a reducing agent
(c) a catalyst
(d) providing an inert medium

Q11: The conversion of $K_2Cr_2O_7$ into $Cr_2(SO_4)_3$ is a process of
(a) Oxidation
(b) Reduction
(c) Decomposition
(d) Substitution
Q12: An element, which never has a positive oxidation state in any of its compounds, is
(a) Boron
(b) Oxygen
(c) Chlorine
(d) Fluorine
Q13: Amino acid is formed by decomposition of which component of our diet?
(a) Carbohydrate
(b) Starch
(c) Protein
(d) Fat
Q14: Loss of electrons is called _____
(a) reduction
(b) oxidation
(c) can be oxidation or reduction
(d) none of these
Q15. In which of the following, heat energy will be evolved?
(a) Electrolysis of water
(b) Dissolution of NH4Cl in water
(c) Burning of L.P.G.
(d) Decomposition of AgBr in the presence of sunlight

Q16. Rancidity can be prevented by
(a) adding antioxidants
(b) storing food away from light
(c) keeping food in refrigerator
(d) all of these

Q17. The reaction of $H_2$ gas with oxygen gas to form water is an example of
(a) combination reaction
(b) redox reaction
(c) exothermic reaction
(d) all of these reactions

Q18. The reaction in which two compound exchange their ions to form two new compounds is called
(a) displacement reaction
(b) combination reaction
(c) double displacement reaction
(d) redox reaction

Q19. On immersing an iron nail in $CuSO_4$ solution for few minutes, you will observe
(a) no reaction takes place
(b) the colour of solution fades away
(c) the surface of iron nails acquire a black coating
(d) the colour of solution changes to green

Q20. An element X on exposure to moist air turns reddish-brown and a new compound Y is formed. The substance X and Y are
(a) X = Fe, Y = $Fe_2O_3$
(b) X = Ag, Y = $Ag_2S$
(c) X = Cu, Y = CuO
(d) X = Al, Y = $Al_2O_3$

Q21. 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

Q22. Oxidation is a process which involves:
a) addition of oxygen b) addition of hydrogen c) removal of oxygen d) removal of hydrogen

Q23. The process of reduction involves
a) addition of oxygen b) addition of hydrogen c) removal of oxygen d) removal of hydrogen

Q24. 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

Q25. When Ag is exposed to air it gets a black coating of :
a) $AgNO_3$ b) $Ag_2S$ c) $Ag_2O$ d) $Ag_2CO_2$

Q26. 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

Q27. What type of chemical reactions take place when electricity is passed through water?
a) Displacement b) Combination c) Decomposition d) Double displacement

Q28. A substance added to food containing fats and oils is called:
a) Oxidant b) Rancid c) Coolant d) Antioxidant

Q29. The condition produced by aerial oxidation of fats and oils is foods marked by unpleasant smell and taste is called;
a) ant oxidation b) reduction c) rancidity d) corrosion

Q30. 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

Q31. 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

Q32. Which of the following gases can be used for storage
a) carbon dioxide or oxygen
b) nitrogen or oxygen
c) carbon dioxide and helium
d) helium or nitrogen

Q33. When green coloured ferrous sulphate crystals are heated, the colour 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 $SO_3$

**THE ASIAN SCHOOL, DEHRADUN**
**MULTIPLE CHOICE QUESTIONS 2019**
**CHEMISTRY CLASS – XII CHAPTER- 2 ACIDS,BASES SALTS**

Q1: The most commonly used indicator in laboratory is
(a) Methyl Orange
(b) Litmus
(c) Phenolphtalein
(d) Universal Indicator

Q2: Which gas is released when a metal reacts with an acid?
(a) $Cl_2$
(b) $O_2$
(c) $H_2$
(d) $SO_2$

Q3: The strength of acid depends upon
(a) density of the acid
(b) oxygen atoms present
(c) number of hydrogen atoms present in the molecule
(d) concentration of H+ ions furnished by the acid

Q4: Which statement is incorrect?
(a) Acids have pH more than 7
(b) Acids give H + ions in water
(c) Acid conduct electricity in aqueous solution
(d) Acids turn blue litmus red.

Q5: Which of the following substance is antacid?
(a) NaCl
(b) $Mg(OH)_2$
(c) HCl
(d) $H_2SO_4$

Q6: Which of the following is strong acid?
(a) Acetic acid
(b) Nitric acid
(c) Citric acid
(d) Oxalic acid

Q7: Who proposed ionic theory of acid and bases
(a) Arrhenius
(b) Bronsted
(c) Lewis
(d) Lowry

Q8: Acid present in bee sting?
(a) Methanoic acid
(b) Hydrochloric acid
(c) Acetic acid
(d) Sulphuric acid

Q9: HCl reacts with NaOH to form salt and water, this reaction is called
(a) Precipitation reaction
(b) Neutralization
(c) Redox reaction
(d) Combination reaction

Q10: Which of the following solutions is the most basic?
(a) pH = 8.2
(b) pH = 9.3

(c) pH = 11.2
(d) pH = 10.5

Q11. Which one of the following is acidic?
(a) Lemon juice
(b) Tomatoes
(c) Milk
(d) All

Q12. Which one of the following will turn red litmus blue?
(a) Vinegar
(b) Baking soda solution
(c) Lemon juice
(d) Soft drinks

Q13. Which one of the following will turn blue litmus red?
(a) Vinegar
(b) Lime water
(c) Baking soda solution
(d) Washing soda solution

Q14. Methyl orange is
(a) Pink in acidic medium, yellow in basic medium
(b) Yellow in acidic medium, pink in basic medium
(c) Colourless in acidic medium, pink in basic medium
(d) Pink in acidic medium, colourless in basic medium.

Q15. Lime water is
(a) CaO
(b) Ca(OH)2
(c) CaCO3
(d) CaCl2

Q16. The nature of calcium phosphate is present in tooth enamel is
(a) Basic
(b) Amphoteric
(c) Acidic
(d) Neutral

Q17. Which of the following salts has no water of crystallization?
(a) Blue vitriol
(b) Washing soda
(c) Baking soda
(d) Gypsum

Q18. The function of quick lime in soda lime mixture is to
(a) Absorb moisture present in soda lime
(b) Increase the efficiency of soda lime
(c) Increase the pH of soda lime
(d) Take part in reaction with NaOH

Q19. The Ph of a solution of HCL is 4. This shows that the molarity of the solution is
(a) 4.0M
(b) 0.4M
(c) 0.0001M
(d) 0.001M

Q20. The difference of molecules of water in gypsum and PoP is
(a)5/2
(b) 2b

(c) 3/2
(d) ½

Q21. Which is known as carbolic acid?
a) Phenol b) Ethanol c) Acetic acid d) Oxalic acid
Q22. Name the most common indicator used in a laboratory?
a) Methyl ornate b) Red litmus c) Universal indicator d) Phenolphthalein

Q23. Name an element which is common to all acids?
a) Sulphur b) Chlorine c) Nitrogen d) Hydrogen
Q24. What type of reaction takes place when an acid dissolves in water :
a) Exothermic b) Endothermic c) Substitution d) Double- displacement
Q25. in pH, the p stands for :
a) potential b) proton c) primitive d) process
Q26. On a pH scale, we can measure pH from :
a) 0-7 b) 7-14 c) 0-14 d) None of the above
Q27. Name an acid which contains both oxygen and hydrogen?
a) Oxyacid b) Hydra acid c) Dilute acid d) Concentrated acid
Q28. The higher the hydronium ion concentration of a solution :
a) the lesser is the pH
b) the higher is the pH
c) there's no changes in pH
d) pH first increased then decreases
Q29. What happens when an acid reacts with metal oxide?
a) Salt and water is formed
b) Metal hydride is formed
c) Oxyacid will be formed
d) Salt and Hydrogen gas is formed
Q30. Which of the following acid is present in Tomato?
a) Phosphoric acid
b) Tartaric acid
c) Oxalic acid
d) Lactic acid
Q31. which of the following is the strongest acid in the world?
a) Hydrochloric acid b) Nitric acid c) Sulphuric acid d) Carborane acid
Q32. Which of the following is a battery acid?
a) Sulphuric acid diluted with water
b) Carboxylic acid mixed with water
c) Concentrated hydrochloric acid
d) Concentrated sulphuric acid
Q33. Blue litmus paper turns into which colour in basic conditions?
a) violet colour b) Red colour c) blue colour d) No change
Q34. Red litmus paper turns into which colour in basic/ alkaline conditions?
a) Violet colour b) red colour c) blue colour d) no change
Q35. Which acid is present in sour milk?
a) Ascorbic acid b) Ethanoic acid c) Tartaric acid d) Lactic acid
Q36. When acids are dissolved in water they produce ions which help in conducting the electricity. This process is known as :
a) Galvanization b) Vulcanisation c) Dissociation d) None of the above
Q37. Which of the following is usually taken to counter constipation?
a) Hydrochloric acid b) Milk of magnesia c) Ascorbic acid d) None of the above
Q38. Which of the following is present in Bee Sting?
a) Tartaric acid b) Methanoic acid c) Citric acid d) Lactic acid
Q39. Tooth enamel is made up of which of the following?

a) Potassium carbonate b) calcium carbonate c) calcium carbonate d) none of the above

Q40. Hydrogen burns with a pop sound in the presence of :

a) Nitrogen b) Oxygen c) Sulphur dioxide d) Argon

**THE ASIAN SCHOOL, DEHRADUN**
**MULTIPLE CHOICE QUESTIONS 2019**
**CHEMISTRY CLASS – XII CHAPTER- 3 METALS AND NON-METALS**

Q1. Which of the following is the best electrical conductor?
(a) Gold
(b) Silver
(c) Copper
(d) Aluminium

Q2. Which of the following is NOT True for metals?
(a) Generally, metals are malleable.
(b) Metals are good conductors of heat.
(c) Metals are electronegative by nature.
(d) Metals displace hydrogen gas from dilute acids.

Q3. In general, the number of electrons in the outermost shell of a metal atom is
(a) 1
(b) 1 to 3
(c) 5 to 8
(d) 8

Q4. Bauxite is an ore of which metal
(a) iron
(b) aluminium
(c) copper
(d) tin

Q5. Which of the following pairs will give displacement reactions?
(a) NaCl solution and copper metal
(b) $MgCl_2$ solution and aluminium metal
(c) $FeSO_4$ solution and silver metal
(d) $AgNO_3$ solution and copper metal.

Q6. Which of the following methods is suitable for preventing an iron frying pan from rusting?
(a) Applying grease
(b) Applying paint
(c) Applying a coating of zinc
(d) All of the above.

Q7. An element reacts with oxygen to give a compound with a high melting point. This compound is also soluble in water. The element is likely to be
(a) calcium
(b) carbon
(c) silicon
(d) iron.

Q8. Food cans are coated with tin and not with zinc because
(a) zinc is costlier than tin.
(b) zinc has a higher melting point than tin.
(c) zinc is more reactive than tin.
(d) zinc is less reactive than tin.

Q9. Haematite is an ore of
(a) iron
(b) aluminium
(c) copper
(d) tin

Q10. What are the constituents of alloy solder?
(a) Copper, zinc
(b) Copper, tin
(c) Lead, Zinc
(d) Lead, tin

Q11. Which of the is more reactive?
(a) Hg
(b) Al
(c) Ag
(d) Ca
Q12. By which reaction metal is obtained from metal oxide?
(a) Liquefaction
(b) Reduction
(c) Calcination
(d) Roasting
Q13. Which non-metallic element is in liquid form?
(a) Carbon
(b) Hydrogen
(c) Bromine
(d) Phosphorus
Q14. Which of the following non-metal is a good conductor of electricity?
(a) Graphite
(b) Phosphorus
(c) Hydrogen
(d) Bromine
Q15. Which of the following is not a half-metal?
(a) silicon
(b) boron
(c) arsenic
(d) chlorine
Q16. The bronze medals are made up of
(a) Cu and Zn
(b) Zn and Ni
(c) Cu and Sn
(d) Cu, Zn, Tn

Q17. Silver articles becomes black on prolonged exposure to air. This is due to the formation of
(a) $Ag_2O$
(b) $Ag_2S$
(c) AgCN
(d) $Ag_2O$ and $Ag_{2S}$

Q18. An aluminium strip is kept immersed in freshly prepared ferrous sulphate solution taken in a test tube, the change observed is that
(a) Green solution slowly turns brown
(b) Lower end of test tube become slightly warm
(c) A colourless gas with the smell of burning sulphur is observed
(d) Light green solution changes to blue.
Q19. An alloy of Zn and Cu is dissolved in dil. HC1. Hydrogen gas is evolved. In this evolution of gas
(a) only zinc reacts with dil. HC1
(b) only copper reacts with dil. HC1
(c) both zinc and copper react with dil. HC1
(d) only copper reacts with water

Q20. A greenish coating develops on copper utensils due to formation of
(a) $CuCo_3$
(b) $Cu(OH)_2$
(c) $Cu(OH)_2.CuCO_3$
(d) CuO

Q21. Which of the following metals cannot be extracted using smelting?
a) Fe b) Al c) Zn d) Pb

Q22. In general, the number of electrons in the outermost shell of a metal atom is :

a) 1 b) 1 to 3 c) 5 to 8 d) 8

Q23. Hematite is an ore of :

a) iron b) aluminium c) copper d) tin

Q24. Etals are refined by using different methods. Which of the following metals are refined by electrolytic refining?

a) Au b) Cu c) Na d) K

Q25. Copper sulphate solution can be easily kept in a container made of :

a) Lead b) Zinc c) Silver d) Aluminium

Q26. Blue gold is an alloy of :

a) Gold and aluminium b) Gold and Indium c) Gold and Silver d) Gold and copper

Q27. Which of the following is incorrect?

a) Zinc Oxide is called as amphoteric oxide
b) silicon counts among metalloids
c) Sodium is kept open in air
d) Metals conduct electricity

Q28. Which metal can be displaced by copper from its salt solution?

a) Silver b) Zinc c) Iron d) Silver

Q29. Which of the following oxide cannot be reduced with carbon to obtain the metal?

a) $Cr_2O_3$ b) $Al_2O_3$ c) $Al_2O_3$ d) All the above

Q30. Although metals from basic oxides, which of the following metals form an amphoteric oxide?

a) Al b) Ca c) Na d) Cu

Q31. Which of the following non-metal is good conductor of electricity?

a) Graphite b) Phosphorus c) Hydrogen d) Bromine

Q32. Which among the following alloys contain mercury as one of its constituents?

a) Stainless steel b) Alnico c) Solder d) zinc amalgam

Q33. Which of the following is true?

a) Color of basic copper carbonate is green
b) Malachite is an ore of copper
c) Aluminum is more reactive than copper
d) All of above

Q34. The ability of metals to be drawn into thin wire is known as :

a) Ductility b) Malleability c) Sonority d) Conductivity

**THE ASIAN SCHOOL, DEHRADUN**

**MULTIPLE CHOICE QUESTIONS 2019**

**CHEMISTRY CLASS – XII CHAPTER- 4 CARBON AND ITS COMPOUND**

Q1: Which of the following is an odd compound?
(a) Ethene
(b) Ethane
(c) Propene
(d) Acetylene

Q2: Which one of the following is an unsaturated hydrocarbon?
(a) Acetylene
(b) Butane
(c) Propane
(d) Decane

Q3: Two neighbours of homologous series differ by
(a) -CH
(b) $-CH_2$
(c) $-CH_3$
(d) $-CH_4$

Q4: General formula of alkyne is
(a) CnH2n+2
(b) CnH2n
(c) CnH2n-2
(d) CnHn

Q5: Which of the following represents alkynes?
(a) -C–C-
(b) -C=C-
(c) -C≡C-
(d) none of these

Q6: Which of the following represents ketones?
(a) -C=O
(b) -OH
(c) -CHO
(d) -COOH

Q7: Which of the following is not an aliphatic hydrocarbon?
(a) ethene
(b) ethane
(c) propyne
(d) benzene

Q8: Complete combustion of a hydrocarbon gives
(a) CO + $H_2O$
(b) $CO_2$+ $H_2O$
(c) CO + $H_2$
(d) $CO_2$ + $H_2$

Q9: Which is NOT correct for isomers of a compound?
(a) they differ in physical properties
(b) they differ in chemical properties
(c) they have same molecular formula
(d) they have same structural formula

Q10: Buckminsterfullerene is an example of _____ of carbon
(a) an isomer
(b) an isotope
(c) an allotrope
(d) a functional group

Q11: Who prepared urea the first time by heating ammonium cynate?
(a) Wöhler
(b) Lavosier
(c) Fuller
(d) Habër

Q12: Butanone is a four-carbon compound with the functional group
(a) carboxylic acid.
(b) aldehyde.
(c) ketone.
(d) alcohol.

Q13: Major constituent of LPG is _____.
(a) ethene
(b) butane
(c) propane
(d) pentane

Q14: The gas used in welding and cutting metals is
(a) ethyne
(b) ethene
(c) ethane
(d) propene

Q15.Covalent compound
(a) have high melting and boiling point
(b) are mostly soluble in water
(c) are formed between atoms of metals and non-metals
(d) are formed by the sharing of electrons in the bonding atoms.

Q6.Theby product of soap is
(a) isoprene
(b) glycerol
(c) butene
(d) ethylene glycol

Q17.Which of the following can be used for the denaturation of ethyl alcohol?
(a) Methyl alcohol
(b) Pyridines
(c) Copper sulphate
(d) All of above

Q18.Soaps are formed by saponification of
(a) alcohols
(b) glycosides
(c) simple esters
(d) carboxylic acids

Q19. Tertiary butane gets oxidised with oxidising agents like alkaline $KMNO_4$ to
(a) Isobutane
(b) Ter-butyl alcohol
(c) Seconadary-propyl alcohol
(d) All of above

Q20. The substnace not responsible for the hardness of water is
(a) Sodium nitrate
(b) calcium hydrogen carbonate
(c) calcium carbonate
(d) magnesium carbonate

**THE ASIAN SCHOOL, DEHRADUN**
**MULTIPLE CHOICE QUESTIONS 2019**
**CHEMISTRY CLASS – XII CHAPTER- 5 PERIODIC CLASSIFACTION OF ELELMENTS**

Q1.Which of the following statements is not a correct statement about the trends when going from left to right across the periods of periodic Table.

(a) The elements become less metallic in nature.
(b) The number of valence electrons increases.
(c) The atoms lose their electrons more easily.
(d) The oxides become more acidic.

Q2.Element X forms a chloride with the formula $XCl_2$, which is a solid with a high melting point. X would most likely be in the same group of the Periodic Table as

(a) Na (b) Mg (c) AI (d) Si

Q3: Which of the following is a Döbereiner's triad?

(a) Ne, Ca, Na (b) $H_2$, $N_2$, $O_2$ (c) Li, Na, K (d) Na, Br, Ar

Q4: Name the scientist who gave the Law of octaves?

(a) Mendeleev (b) Newlands (c) Dalton (d) Döbereiner

Q5: Mendeleev's periodic table is based on the

(a) Atomic weight (b) Atomic number (c) Atomic radius (d) Atomic volume.

Q6: Which of the following is not an inert gas?

(a) Helium (He) (b) Argon (Ar) (c) Bromine (Br) (d) Radon (Rn)

Q7: When we move from left to right across a period, the electron affinity

(a) remains the same (b) approaches zero (c) decreases (d) increases

Q8: Which element still has dicey position in modern periodic table?

(a) Carbon (b) Nitrogen (c) Oxygen (d) Hydrogen

Q9: Modern periodic table is based on _____.

(a) atomic mass (b) mass number (c) atomic number (d) atomic volume

Q10: The law of triads is not applicable on

(a) Cl, Br, I (b) S, Se, Te (c) Na, K, Rb (d) Ca, Sr, Ba

Q11: Which of the following elements is a semi-metal ?

(a) Aluminium (b) Chlorine (c) Sodium (d) Silicon

Q12: As we move from left to right in a period in modern periodic table, Atomic sizes of the elements generally

(a) increase (b) decrease (c) remain same (d) approach zero

Q13: As we move from top to bottom in a group in modern periodic table, generally atomic size of elements

(a) increases (b) decreases (c) remains same (d) approaches zero

Q14: Which group of elements in modern periodic table is referred 'alkali metals'

(a) Group 1 (b) Group 2 (c) Group 17 (d) Group 18

Q15: Group 17 elements are also called as

(a) Alkali Metals (b) Alkaline Earth Metals (c) Halogens (d) Noble Gases

Q16: Group 18 elements are also called as

(a) Alkali Metals (b) Alkaline Earth Metals (c) Halogens (d) Noble Gases

Q17.Identify the group which is not a Dobereiner triad

a. Li, Na, K b. Be, Mg, Cr c. Ca, Sr, Ba d. Cl, Br, I

Q18.Which is not true about the noble gases?

a. They are non metallic in nature b. They exist in atomic form
c. They are radioactive in nature d. Xenon is the most reactive among these

Q19. Identify the wrong sequence of the elements in a group

a. Ca, Br, Ba b. Cu, Au, Ag c. N,P, As d. Cl, Br, I

Q20. An element with atomic number will form a basic oxide_____

a. 7 b. 17 c. 14 d. 11