



## MATTER IN OUR SURROUNDINGS

9. Arrange the following substances in decreasing order of force of attraction between the particles  
1) Water                      2) Sugar                      3) Oxygen                      [   ]  
a) Water > Sugar > Oxygen                      b) Sugar > Oxygen > Water  
c) Sugar > water > oxygen                      d) Water > Oxygen > Sugar.
10. Which of following are different forms of matter.                      [   ]  
a) Air                      b) Water                      c) Glass                      d) Wood
11. **Assertion (A)** : Alcohol evaporates faster than water.  
**Reason (R)** : The interparticle forces of attraction in alcohol are less than in water.  
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 not correct explanation of A  
c) A is correct and R is incorrect                      d) A is incorrect and R is correct.
12. **Statement (A)** : The process due to which a solid changes into liquid state by absorbing heat energy is called melting (or) fusion.                      [   ]  
**Statement (B)** : The process due to which a liquid changes into gaseous state by absorbing heat energy is called boiling (or) vapourisation.  
**Statement (C)** : The process due to which a gas changes directly into solid state is called sublimation.  
a) All the above statements are correct                      b) All the above statements are incorrect  
c) A, B are correct and C is in correct                      d) A, B are incorrect and C is correct.

## MATERIALS & THINGS

13. Choose the opaque object from the following                      [   ]  
a) Charcoal                      b) Air                      c) Glass                      d) Water
14. Which one of the following is soluble in water                      [   ]  
a) Alcohol                      b) Sodium chloride                      c) Coconut oil                      d) Sugar
15. **Assertion (A)** : Iron is good conductor of heat                      [   ]  
**Reason (R)** : Materials which conduct heat quickly are called conductor of heat.  
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 correct and R is incorrect                      d) A is incorrect and R is correct
16. **Statement (A)** : The amount of mater in any object is called its weight                      [   ]  
**Statement (B)** : Things can be grouped on the basis of their shape and size  
**Statement (C)** : Water and glass are from transperent materials.  
a) All the above statements are correct                      b) All the above statements are incorrect.  
c) A, B are correct and C is incorrect.                      d) A, B are incorrect and C is correct

## SEPARATION OF SUBSTANCE

17. A mixture of ammonium chloride and sand is separated by                      [   ]  
a) Evaporation                      b) Decantation                      c) Sublimation                      d) Filtration
18. Sand from water is separated by                      [   ]  
a) Sieving                      b) Sedimentation                      c) Decantation                      d) Filtration



4. **Statement (A)** : Hydrated copper sulphate is commonly known as blue vitriol. [ ]  
**Statement (B)** : All soluble hydroxides are alkalies  
**Statement (C)** : Antacid is used for the treating indigestion  
 a) All the above statements are correct                      b) All the above statements are incorrect.  
 c) A, B are correct and C is incorrect.                      d) A, B are incorrect and C is correct

### CHANGES AROUND US

5. Ripening of fruits is a [ ]  
 a) Temporary change    b) Physical change    c) Natural change    d) All the above
6. When an iron nail is dipped in copper sulphate solution and kept undisturbed for half an hour or more ? Then what is the observation of student. [ ]  
 a) The solution turns from blue to green                      b) A brown layer is deposited on the nail  
 c) A chemical reaction takes place                              d) The solution turns from blue to red
7. **Assertion (A)** : Zinc metal is generally used for galvanization. [ ]  
**Reason (R)** : Iron rust can be prevented by galvanization  
 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 correct and R is incorrect                              d) A is incorrect and R is correct
8. **Statement (A)** : Vitamin C is present in ascorbic acid [ ]  
**Statement (B)** : The brown colour of the vegetables can be prevented by cold water.  
**Statement (C)** : The chemical name of vinegar is acetic acid  
 a) All the above statements are correct                      b) All the above statements are incorrect.  
 c) A, B are correct and C is incorrect.                      d) A, B are incorrect and C is correct

### PERIODIC PROPERTIES

9. The number of groups and periods in the long form of the periodic table is [ ]  
 a) 7, 18                      b) 18, 7                      c) 8, 17                      d) 17, 8
10. Which of the following elements have zero or positive electron affinity [ ]  
 a) He                      b) C                      c) Ar                      d) Ne
11. **Assertion (A)**: The first ionization energy of Be is greater than that of B. [ ]  
**Reason (R)** : 2p electrons are more loosely held than 2s electrons.  
 a) Both A and R are correct and R is the correct explanation of A.  
 b) Both A and R are correct but R is not the correct explanation of A.  
 c) A is correct, R is incorrect                              d) A is incorrect but R is correct
12. **Statement (A)** : vander Waals' radii of an element is always larger than its covalent radii.  
**Statement (B)** : Metallic radii is always larger than the covalent radii. [ ]  
**Statement (C)** : Crystal radius is used for metals  
 a) All the above statements are correct                      b) All the above statements are incorrect  
 c) A and B are correct but C is incorrect                      d) A and B are incorrect but C is correct

### CHEMICAL BONDING

13. Reasons for the participation of valence shell electrons in chemical bonding are. [ ]  
 a) Valence electrons are firmly bounded to the nucleus  
 b) Valence electrons are easily attracted by other approaching atom  
 c) Valence electrons are tightly bounded to the nucleus  
 d) Valence electrons are not easily attracted by other approaching atom



24. **Statement (A)** : Nitrogen is a metal [     ]  
**Statement (B)** : Aluminium is a non-metal  
**Statement (C)** : Gold is a metalloid  
a) All the above statements are correct                      b) All the above statements are incorrect  
c) A and B are correct but C is incorrect                      d) A and B are incorrect but C is correct

## SOLUTIONS

25. The component present in lesser quantity in a binary solution is [     ]  
a) Solvent                      b) Solute                      c) Solution                      d) Either a or b
26. The factors that are affecting the solubility of a solid in a liquid are [     ]  
a) Temperature                      b) Pressure                      c) Nature of solute                      d) Nature of solvent
27. **Assertion (A)** : Molality is independent of temperature  
**Reason (R)** : There is no volume factor in the expression of molality [     ]  
a) Both A and R are correct and R is the correct explanation of A  
b) Both A and R are correct and R is not the correct explanation of A  
c) A is correct, R is incorrect                      d) A is incorrect, R is correct
28. **Statement (A)** : If a solution contains the maximum quantity of solute, then it is called unsaturated solution.  
**Statement (B)** : If a solution contains less than the maximum quantity of solute, then it is called saturated solution.  
**Statement (C)** : If a solution contains more than the maximum quantity of solute, then it is called supersaturated solution. [     ]  
a) All the statements A, B and C are correct                      b) All the statements A, B and C are incorrect  
c) A, B are correct and C is incorrect                      d) A, B are incorrect and C is correct

## VIII - CLASS

### ATOMIC STRUCTURE

1. The canal rays are [     ]  
a) A stream of electrons                      b) A stream of positively charged particles  
c) Light rays                      d) A stream of uncharged particles
2. Among the following electronic configuration of chromium is [     ]  
a)  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^4$                       b)  $[Ar] 4s^1 3d^5$   
c)  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1 3d^5$                       d)  $[Ar] 4s^2 3d^5$
3. **Assertion (A)** : The maximum number of electrons in 4<sup>th</sup> orbit is 32. [     ]  
**Reason (R)** : The maximum number of electrons in n<sup>th</sup> orbit is  $n^2$   
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 correct and R is incorrect                      d) A is incorrect and R is correct
4. **Statement (A)** : Alpha particles are much heavier than electrons [     ]  
**Statement (B)** : Alpha particles are positively charged.  
**Statement (C)** : Alpha particles move with very high velocity.  
a) All the above statements are correct                      b) All the above statements are incorrect.  
c) A, B are correct and C is incorrect.                      d) A, B are incorrect and C is correct



## CHEMICAL BONDING

5. Among the following, the element follows duplet rule is [ ]  
a) Helium                      b) Sodium                      c) Oxygen                      d) Sulphur
6. Among the following, the monovalent electropositive element is [ ]  
a) Oxygen                      b) Potassium                      c) Chlorine                      d) Sodium
7. **Assertion (A) :**  $\sigma$  bond is formed by the axial overlap of the two orbitals. [ ]  
**Reason (R) :**  $\pi$  bond is formed by the lateral overlap of two orbitals.  
a) Both A and R are correct and R is the correct explanation of A.  
b) Both A and R are correct and R is not the correct explanation of A.  
c) A is correct, R is incorrect.                      d) A is incorrect, R is correct.
8. **Statement (A) :** In  $SF_4$  molecule, 'S' does not obey octet rule. [ ]  
**Statement (B) :** In  $PCl_3$  molecule, 'P' obey octet rule.  
**Statement (C) :** In  $SF_6$  molecule, all the atoms obey octet rule.  
a) All the above statements are correct                      b) All the above statements are incorrect.  
c) A, B are correct and C is incorrect.                      d) A, B are incorrect and C is correct

## MOLECONCEPT

9. 1 mole of  $KClO_3$  weighs [ ]  
a) 142.5g                      b) 122.5g                      c) 245g                      d) 402g
10. Which of the following compound has the same molecular weight and equivalent weight [ ]  
a)  $H_3PO_2$                       b)  $HCl$                       c)  $HNO_3$                       d)  $H_3PO_4$
11. **Assertion (A) :** Vapour density =  $\frac{\text{Density of gas}}{\text{Density of hydrogen gas}}$  [ ]  
**Reason (R) :** Vapour density of oxygen molecule at STP is 16.  
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 not correct explanation of A  
c) A is correct and R is incorrect  
d) A is incorrect and R is correct
12. **Statement (A) :** One mole of any substance contains  $6.023 \times 10^{23}$  particles [ ]  
**Statement (B) :** The gram formula mass of  $CaCO_3$  is 100g  
**Statement (C) :** The volume of one mole any gas at S.T.P is 22.4 lit  
a) All the above statements are correct  
b) All the above statements are incorrect.  
c) A, B are correct and C is incorrect  
d) A, B are incorrect and C is correct

## SOLUTIONS

13. If air is taken as a binary solution, the solvent is [ ]  
a)  $N_2$                       b)  $O_2$                       c)  $CO_2$                       d)  $H_2$
14. Among the following substances, solubility in water increases with increase of temperature in [ ]  
a)  $NaNO_3$                       b)  $KOH$                       c)  $NaCl$                       d)  $NH_4Cl$

15. **Assertion (A)** : Molarity of a solution decreases with an increase of temperature  
**Reason (R)** : As the temperature increases, volume of the solution increases [ ]  
 a) Both A and R are correct and R is the correct explanation of A  
 b) Both A and R are correct and R is not the correct explanation of A  
 c) A is correct, R is incorrect d) A is incorrect, R is correct
16. **Statement (A)** : Mass percentage has no units [ ]  
**Statement (B)** : Volume percentage has no units  
**Statement (C)** : Concentration of a solution is the amount of solute present in unit volume of solution  
 a) All the statements A, B and C are correct b) All the statements A, B and C are incorrect  
 c) A, B are correct and C is incorrect d) A, B are incorrect and C is correct

## GASEOUS STATE

17. 2.5 L of a sample of gas at 27°C and 1 bar pressure compressed to a volume of 500 ml keeping the temperature constant, the increase in pressure is [ ]  
 a) 2 bar b) 4 bar c) 6 bar d) 5 bar
18. Gases are [ ]  
 a) Highly compressible b) Highly expansible  
 c) Exerts pressure in all directions d) Have low density
19. **Assertion (A)** : Compressibility factor of non-ideal gases is always greater than unity. [ ]  
**Reason (R)** : Non-ideal gases exert higher pressure than expected.  
 a) Both A and R are correct and R is is correct explanation of A  
 b) Both A and R are correct, but reason is not correct explanation of A  
 c) A is correct but R is incorrect d) A is incorrect but R is correct
20. **Statement (A)** : At constant temperature graphs drawn are called Isobars [ ]  
**Statement (B)** : At constant temperature the volume of given mass of gas is directly proportional to pressure of gas.  
**Statement (C)** : According to Boyle's Law  $P_1 V_1 = P_2 V_2$   
 a) All the statements A, B and C are correct b) All the statements A, B and C are incorrect  
 c) A, B are correct and C is incorrect d) A, B are incorrect and C is correct

## CHEMICAL BONDING

21. The rate of reaction that does not involve gases, is not dependent on [ ]  
 a) pressure b) temperature c) concentration d) catalyst
22. Among the following, which are affected by pressure changes [ ]  
 a)  $\text{CaCO}_3(s) \rightleftharpoons \text{CaO}(s) + \text{CO}_2(g)$  b)  $2 \text{NaNO}_2(s) + \text{O}_2(g) \rightleftharpoons 2 \text{NaNO}_3(s)$   
 c)  $\text{NH}_2\text{COONH}_4(s) \rightleftharpoons 2\text{NH}_3(g) + \text{CO}_2(g)$  d)  $\text{C}(s) + \text{H}_2\text{O}(g) \rightleftharpoons \text{CO}(g) + \text{H}_2(g)$
23. **Assertion (A)** :  $\text{N}_{2(g)} + 3\text{H}_{2(g)} \rightleftharpoons 2\text{NH}_{3(g)}$   
**Reason (R)** : At equilibrium state both the forward and backward reactions move with equal speeds. [ ]  
 a) Both A and R are correct and R is the correct explanation of A  
 b) Both A and R are correct and R is not the correct explanation of A  
 c) A is correct, R is incorrect  
 d) A is incorrect, R is correct





## IX - CLASS

### MATTER AROUND US

- Which of the following statements do not go with the liquid state [    ]
  - Particles are loosely packed in the liquid state
  - Fluidity is the maximum in the liquid state
  - Liquids cannot be compressed or less extent
  - Liquids take up the shape of any container in which these are placed
- Which of the following increases the rate of evaporation [    ]
  - surface area
  - humidity
  - temperature
  - wind
- Assertion (A) :** The amount of heat energy required to convert one 'kg' of a solid into the liquid state without any rise in temperature is called latent heat of fusion.  
**Reason (R) :** The amount of heat energy required to convert one 'kg' of a liquid into vapour state without any rise in the temperature is called latent heat of vapourisation.
  - Both A and R are true and R is the correct explanation of A [    ]
  - Both A and R are true and R is not correct explanation of A
  - A is correct and R is incorrect
  - A is incorrect and R is correct.
- Statement (A) :** The process due to which a solid changes into liquid state by absorbing heat energy is called melting (or) fusion. [    ]  
**Statement (B) :** The process due to which a liquid changes into gaseous state by absorbing heat energy is called boiling (or) vapourisation.  
**Statement (C) :** The process due to which a gas changes directly into solid state is called sublimation.
  - All the above statements are correct
  - All the above statements are incorrect
  - A, B are correct and C is incorrect
  - A, B are incorrect and C is correct.

### IS MATTER PURE

- Two miscible liquids with different boiling points separated by [    ]
  - Separating funnel
  - distillation
  - Sublimation
  - Solvent extraction
- In which of the following, sedimentation will not take place [    ]
  - Sulphur + water
  - Soil + water
  - Finesand + water
  - Albumin + water
- Assertion (A) :** Tyndall effect is observed in colloids [    ]  
**Reason (R) :** Scattering of light is observed in colloids
  - Both A and R are true and R is the correct explanation of A
  - Both A and R are true and R is not correct explanation of A
  - A is correct and R is incorrect
  - A is incorrect and R is correct.
- Statement I :** A mixture without visible boundaries between its components is called homogenous mixture.  
**Statement II :** All homogenous mixtures are called suspensions [    ]
  - Statement I is correct, II is incorrect.
  - Statement II is correct, I is incorrect.
  - Both statements I and II are correct.
  - Both statements I and II are incorrect.











12. **Statement A** : When the ring contains more or equal number of carbon atoms than the alkyl group attached to it, then it is named as a derivative of cyclo alkane and the alkyl group is treated as substituent. [ ]
- Statement B** : When the alkane chain contains greater number of carbon atoms than present in the ring, the compound is considered as the derivative of alkane and the ring is designated as substituent.
- Statement C** : The word cyclo is prefixed before the name of alkene and alkyne having the same number of carbon atoms as in the ring.
- a) All the statements A, B and C are correct      b) All the statements A, B and C are incorrect  
c) A, B are correct and C is incorrect      d) A, B are incorrect and C is correct

## ISOMERISM

13. Both acetaldehyde and vinyl alcohol belongs to [ ]  
a) Metamerism      b) Tautomerism  
c) Position isomerism      d) Geometrical isomerism

14. Geometrical isomerism is possible about which of the following multiple bond [ ]  
a)  $\text{>C}=\text{N}$       b)  $-\text{N}=\text{N}-$       c)  $\text{>C}=\text{C}<$       d)  $\text{O}=\text{O}$

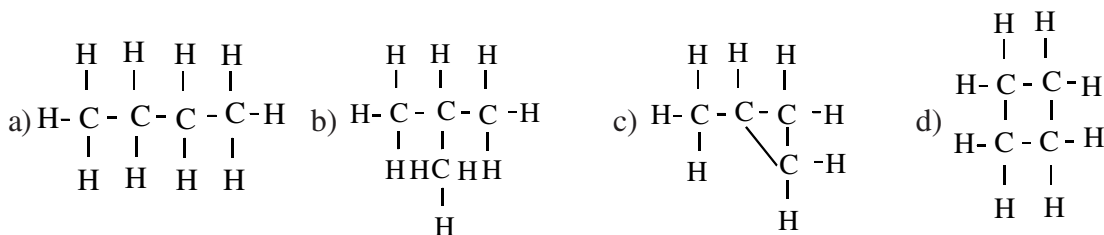
15. **Assertion (A)** :  $\begin{array}{c} \text{Cl} \quad \quad \text{Br} \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{H} \quad \quad \text{Br} \end{array}$  does not show geometrical isomerism [ ]

**Reason (R)** : Double bonded carbon atom has two identical groups.

- a) Both A and R are true and R is the correct explanation of A  
b) Both A and R true and R is not the correct explanation of A  
c) A is true but R is false      d) A is false but R is true
16. **Statement (A)** : Superimposable mirror image is called chiral [ ]  
**Statement (B)** : Non super imposable mirror image is called achiral  
**Statement (C)** : The necessary condition for a molecule to exhibit optical isomerism is that it should be dissymmetric or chiral.
- a) All the statements A, B and C are correct      b) All the statements A, B and C are incorrect  
c) A, B are correct and C is incorrect      d) A, B are incorrect and C is correct

## CARBON & ITS COMPOUNDS

17. The hydrocarbons with functional group – CHO are called [ ]  
a) Aldehydes      b) Alcohols      c) Ketones      d) Acids
18. Which of the following as correct structural isomers of butane [ ]



19. **Assertion (A)** : Diamond and fullerenes are the allotropes of carbon. [    ]  
**Reason (R)** : Although diamond and fullerene differ in structure, but they produce same gas on heating.  
 a) Both 'A' and R are correct and 'R' is the correct explanation of 'A'  
 b) Both 'A' and 'R' are correct but R is not the correct explanation of A  
 c) 'A' is false, R is true  
 d) 'A' is true, R is false
20. **Statement (A)** :  $C_4H_{10}$ ,  $C_6H_{14}$  belongs to same homologous series [    ]  
**Statement (B)** : Urea was prepared first time in the laboratory by heating ammonium cyanate  
**Statement (C)** : Soap particles gets aggregated and these aggregated particles are of colloidal size known as micelles  
 a) All the statements A, B and C are correct      b) All the statements A, B and C are incorrect  
 c) A, B are correct and C is incorrect      d) A, B are incorrect and C is correct

### CHEMICAL BONDING

21. The hybridisation of 'O' in  $H_2O$  is [    ]  
 a)  $sp^2$                                       b)  $sp^3$                                       c)  $sp$                                       d)  $sp^3 d$
22. The molecules formed by p-p overlapping are [    ]  
 a)  $Br_2$                                       b)  $H_2$                                       c)  $N_2$                                       d)  $I_2$
23. **Assertion** : Ionic bond is strongest bond [    ]  
**Reason** : Strong electrostatic forces of attraction are present between two oppositely charged ions.  
 a) Both A and R are correct and R is the correct explanation of A.  
 b) Both A and R are correct and R is not the correct explanation of A.  
 c) A is correct, R is incorrect.  
 d) A is incorrect, R is correct.
24. **Statement (A)** : The electrons present in outermost shell are called valence electrons. [    ]  
**Statement (B)** : Generally, the electrons of inner shell do not participate in chemical bonding.  
**Statement (C)** : The valence electrons are represented by Lewis dot symbols.  
 a) All the statements A, B and C are correct      b) All the statements A, B and C are incorrect  
 c) A, B are correct and C is incorrect      d) A, B are incorrect and C is correct

### PERIODIC CLASSIFICATION

25. Ionization energy of nitrogen is more than oxygen because [    ]  
 a) Nucleus has more attraction for electrons.      b) Half filled p orbitals are more stable.  
 c) Nitrogen atom is small.      d) More penetration effect.
26. Which of the following factors effect the E.A [    ]  
 a) atomic size                                      b) Shielding effect  
 c) nuclear charge                                      d) Lanthanide contraction
27. **Assertion (A)** :  $Na^+$  ion radius is always smaller than Na atom. [    ]  
**Reason (R)** : The radius of the cation is always smaller than parent atom.  
 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 not correct explanation of A  
 c) A is correct and R is incorrect      d) A is incorrect and R is correct.

28. **Statement (A)** : Repeating the properties of elements in a regular intervals known as periodicity. [     ]  
**Statement (B)** : Having the similar valence electronic configuration is cause of periodicity.  
**Statement (C)** : Higher the inner electrons greater shall be the value of screening effect.  
a) All the above statements are correct                      b) All the above statements are incorrect  
c) A and B are correct but C is incorrect                      d) A and B are incorrect but C is correct

### SPECTRUM & ATOMIC STRUCTURE

29. Two photons "X" and "Y" have the wave lengths of 1nm and  $1\text{A}^0$ . The ratio of the energies of "X" and "Y" is [     ]  
a) 10 : 1                      b) 1 : 1                      c) 100 : 1                      d) 1 : 10
30. The impossible set of quantum numbers is [     ]
- |    | n | l | m  | s    |    | n | l | m | s    |
|----|---|---|----|------|----|---|---|---|------|
| a) | 3 | 2 | -2 | +1/2 | b) | 1 | 1 | 0 | +1/2 |
| c) | 3 | 3 | 2  | +1/2 | d) | 5 | 3 | 0 | -1   |
31. **Assertion (A)** : In Sommerfelds model, circular orbit is possible for the electron in K shell. [     ]  
**Reason (R)** : Principal quantum number and azimuthal quantum number are equal.  
a) Both A and R are correct and R is the correct explanation of A.  
b) Both A and R are correct and R is not the correct explanation of A.  
c) A is correct, R is incorrect.                      d) A is incorrect, R is correct
32. **Statement (A)** : Angular momentum of electron in orbits is quantised. [     ]  
**Statement (B)** : While revolving in stationary orbits electrons do not lose energy.  
**Statement (C)** :  $mvr = \frac{nh}{2\pi}$ .  
a) All the above statements are correct                      b) All the above statements are incorrect.  
c) A, B are correct and C is incorrect.                      d) A, B are incorrect and C is correct

### IONIC EQUILIBRIUM

33. What is the pH of 0.05M  $\text{Ba(OH)}_2$  [     ]  
a) 1                      b) 13                      c) 5                      d) 9
34. Among the following, strong acids are [     ]  
a)  $\text{HCl}$                       b)  $\text{HCN}$                       c)  $\text{H}_2\text{SO}_4$                       d)  $\text{H}_2\text{CO}_3$
35. **Assertion (A)** :  $\text{NH}_4\text{Cl}$  is salt of strong acid and weak base [     ]  
**Reason (R)** : The aqueous solution of  $\text{NH}_4\text{Cl}$  is basic in nature  
a) Both A and R true and R is the correct explanation of A  
b) Both A and R are true and R is not correct explanation of A  
c) A is correct and R is incorrect                      d) A is incorrect and R is correct
36. **Statement (A)** : Metals reacts with acids, and liberates hydrogen gas. [     ]  
**Statement (B)** : Metal carbonates reacts with acids, and liberate carbondioxide gas.  
**Statement (C)** : Metal oxides reacts with acids, to form salt and water.  
a) All A, B, C are correct                      b) A, B, C are incorrect  
c) A, B are correct and C is incorrect                      d) A, B are incorrect and C is correct

## CHEMICAL REACTIONS & EQUATION

37. Based on the reaction given below, what is the correct decreasing order of reactivity of metals ? [     ]
- i)  $\text{Zn}_{(s)} + \text{CuSO}_{4(aq)} \rightarrow \text{ZnSO}_{4(aq)} + \text{Cu}_{(s)}$
- ii)  $\text{Fe}_{(s)} + \text{CuSO}_{4(aq)} \rightarrow \text{FeSO}_{4(aq)} + \text{Fe}_{(s)}$
- iii)  $\text{Cu}_{(s)} + 2\text{AgNO}_{3(aq)} \rightarrow \text{Cu}(\text{NO}_3)_{2(aq)} + 2\text{Ag}_{(s)}$
- iv)  $\text{Zn}_{(s)} + \text{FeSO}_{4(aq)} \rightarrow \text{ZnSO}_{4(aq)} + \text{Fe}_{(s)}$
- a)  $\text{Ag} < \text{Cu} < \text{Fe}$       b)  $\text{Fe} > \text{Cu} > \text{Ag} > \text{Zn}$     c)  $\text{Zn} > \text{Fe} > \text{Cu} > \text{Ag}$     d)  $\text{Zn} < \text{Fe} < \text{Ag} < \text{Cu}$
38. Which one of the following reaction can be a non- redox reaction [     ]
- a) combination      b) decomposition      c) displacement      d) double displacement
39. **Assertion (A) :** In a reaction,  $\text{Mg}_{(s)} + \text{CuSO}_{4(aq)} \rightarrow \text{MgSO}_{4(aq)} + \text{Cu}_{(s)}$ . Mg is a reductant but itself gets oxidised. [     ]
- Reason (R) :** Oxidant is reduced by accepting electrons and reductant is oxidised by losing electrons.
- a) Both 'A' and R are correct and 'R' is the correct explanation of 'A'
- b) Both 'A' and 'R' are correct but R is not the correct explanation of A
- c) 'A' is false, R is true      d) 'A' is true, R is false
40. **Statement (A) :** Rancidity is an oxidation reaction in which the spoilage of food occurs
- Statement (B) :** Rusting of iron is an example of corrosion reaction. [     ]
- Statement (C) :** The colour of  $\text{PbI}_2$  precipitate is white
- a) All A, B, C are correct      b) A, B, C are incorrect
- c) A, B are correct and C is incorrect      d) A, B are incorrect and C is correct