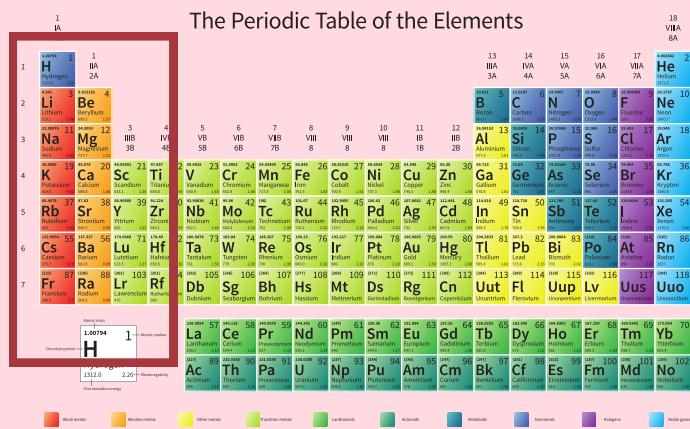




INORGANIC CHEMISTRY

ENTHUSIAST | LEADER | ACHIEVER



EXERCISE

s-Block Elements

ENGLISH MEDIUM

EXERCISE-I (Conceptual Questions)

Build Up Your Understanding

PROPERTIES AND COMPOUNDS

SB0012

SB0023

- 20.** Sodium loses its lustre on exposure to moist air due to formation of –
 (1) Na_2O , NaOH and Na_2CO_3
 (2) Na_2O and NaOH
 (3) Na_2O and Na_2CO_3
 (4) NaOH and Na_2CO_3
- SB0024**
- 21.** Potassium carbonate when heated to high temperature.
 (1) Gives CO_2 (2) Gives O_2
 (3) Gives CO (4) Gives no gas at all
- SB0025**
- 22.** On Flame test K give _____ colour –
 (1) Golden yellow (2) Crimson red
 (3) Violet (4) Apple green
- SB0026**
- 23.** An element having electronic configuration $1\text{s}^2 2\text{s}^2 2\text{p}^6 3\text{s}^2 3\text{p}^6 4\text{s}^1$ will form –
 (1) Acidic oxide (2) Basic oxide
 (3) Amphoteric oxide (4) Neutral oxide
- SB0027**
- 24.** Which decomposes on heating –
 (1) NaOH (2) KOH (3) LiOH (4) RbOH
- SB0028**
- 25.** Which metal does not form ionic hydride –
 (1) Na (2) Rb (3) Ca (4) Be
- SB0029**
- 26.** The element of IA group which combines directly with nitrogen is –
 (1) Li (2) Na (3) K (4) Cs
- SB0030**
- 27.** Which of the following is paramagnetic
 (1) K_2O (2) K_2O_2 (3) KO_2 (4) Na_2O
- SB0032**
- 28.** A compound which upon hydrolysis releases ammonia is –
 (1) Li_3N (2) LiNO_3
 (3) NaNO_3 (4) None of these
- SB0033**
- 29.** Which statement will be true for solution, when Ba is dissolved in ammonia:-
 (1) Solution becomes blue
 (2) Solution becomes good conductor
 (3) Solution remains colourless
 (4) Both (1) and (2) are correct
- SB0037**
- 30.** In K, Rb and Cs, the decreasing order of reducing power in gaseous state is:-
 (1) $\text{K} > \text{Cs} > \text{Rb}$ (2) $\text{Cs} > \text{Rb} > \text{K}$
 (3) $\text{K} < \text{Cs} < \text{Rb}$ (4) $\text{Rb} > \text{Cs} > \text{K}$
- SB0038**
- 31.** The correct order of density of following elements is:- (Be, Mg, Ca, Sr)
 (1) $\text{Be} > \text{Mg} > \text{Ca} > \text{Sr}$ (2) $\text{Ca} > \text{Mg} > \text{Be} > \text{Sr}$
 (3) $\text{Ca} < \text{Mg} < \text{Be} < \text{Sr}$ (4) $\text{Mg} < \text{Ca} < \text{Sr} < \text{Be}$
- SB0039**
- 32.** On addition of metal, colour of liquid NH_3 solutions converts into bronze, the reason is :-
 (1) Ammoniated electrons
 (2) Metal amide formation
 (3) Liberation of NH_3 gas
 (4) Cluster formation of metal ions
- SB0041**
- 33.** On allowing ammonia solution of s-block metals to stand for a long time, blue colour becomes fade. The reason is:-
 (1) Formation of NH_3 gas
 (2) Formation of metal amide
 (3) Cluster formation of metal ions
 (4) Formation of metal nitrate
- SB0042**
- 34.** Which of the following s-block element reacts with NaOH to give water soluble complex :-
 (1) Al (2) Ca (3) Be (4) Li
- SB0043**
- 35.** When Na and Li placed in dry air we get :-
 (1) NaOH , Na_2O , Li_2O
 (2) Na_2CO_3 , Na_2O_2 , Li_2O
 (3) Na_2O , Li_3N , NH_3
 (4) Na_2O , Li_2O , Li_3N
- SB0045**
- 36.** Which of the following oxide having O_2^{-2} (peroxide) anion :-
 (1) Na_2O (2) BaO_2 (3) RbO_2 (4) KO_2
- SB0046**
- 37.** Generally which of the following properties of IA group metals increases as the atomic number rises:
 (a) Metallic character (b) Ionic radius
 (c) Melting point (d) Reactivity
 (e) Ionisation potential
 Correct answer is :-
 (1) a, b, c (2) a, b, d (3) c, d, e (4) All
- SB0047**

38. Which of the following s-block metals do not impart any colour to the flame
 (1) Li, Be (2) Cs, Fr (3) Be, Mg (4) Ba, Ra

SB0048

39. Which can not be used to generate H_2 :-
 (1) Al + NaOH
 (2) Zn + NaOH
 (3) Mg + NaOH
 (4) LiH + H_2O

SB0049

40. Only those elements of s-block can produce superoxides which have :-
 (1) High ionisation energy
 (2) High electronegativity
 (3) High charge density
 (4) Low ionisation potential

SB0050

41. Alkali metals dissolve in liquid NH_3 then which of the following observations is not true:
 (1) It becomes paramagnetic
 (2) Solution turns into blue due to solvated electrons
 (3) It becomes diamagnetic
 (4) Solution becomes conducting

SB0052

42. Alkali metals give colour in bunsen flame due to -
 (1) Low electronegativity
 (2) One e^- in outer most orbit
 (3) Smaller atomic radii
 (4) Low ionisation energy

SB0053

43. Which of the following ions forms a hydroxide that is highly soluble in water ?
 (1) K^+ (2) Zn^{2+} (3) Ni^{2+} (4) Al^{3+}

SB0054

44. The plaster of paris is hardened by
 (1) Liberating CO_2
 (2) Giving out water
 (3) Combining with water
 (4) Changing into $CaCO_3$

SB0056

45. Which of the following alkali metal carbonate is the least stable and decomposes readily
 (1) Li_2CO_3 (2) Na_2CO_3
 (3) K_2CO_3 (4) Cs_2CO_3

SB0057

46. In the reaction $M + O_2 \longrightarrow MO_2$ (super oxide) the metal is
 (1) Li (2) Na (3) K (4) Ba

SB0058

47. Li does not resemble other alkali metals in following properties
 (1) Li_2CO_3 decomposes into oxides while other alkali carbonates are thermally stable
 (2) $LiCl$ is predominantly covalent
 (3) Li_3N is stable
 (4) All

SB0059

48. Be and Al resemble in
 (1) Both become passive on reaction with HNO_3 due to formation of oxide layer
 (2) Their chlorides are lewis acids
 (3) Hydroxides are soluble in alkali as well as in acid
 (4) All

SB0060

49. Consider the following points
 (a) Cs is the strongest reducing agent in IA group element
 (b) Be does not form peroxide in II A group elements
 (c) The density of potassium is less than sodium
 (d) In alkali metals Li, Na, K and Rb, lithium has the minimum value of M.P.
 Point out that the statement -
 (1) (a) & (b) are correct
 (2) (a), (b) & (c) are correct
 (3) (b) & (c) are correct
 (4) (b), (c) & (d) are correct

SB0061

50. Mg^{+2} does not form either peroxide or superoxide, because
 (1) Mg^{+2} ion is relatively bigger
 (2) Mg^{+2} ion is relatively smaller
 (3) Mg^{+2} ion is stable
 (4) Mg^{+2} ion is unstable

SB0062

51. Which of the following is true about Alkali metals
 (1) All form solid bicarbonates
 (2) All form ionic salt like hydride MH
 (3) All form superoxide like KO_2
 (4) All form nitrides

SB0064

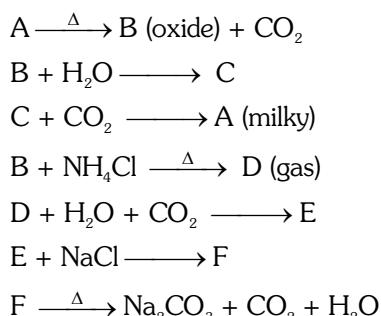
52. In between the metals A and B both form oxide but only B forms nitride, when both burn in air so A and B are
 (1) Cs, K (2) Mg, Ca
 (3) Li, Na (4) K, Mg

SB0066

53. There is loss in weight when mixture of Li_2CO_3 and $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ is heated strongly. This loss is due to :
 (1) Li_2CO_3 (2) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
 (3) both (4) none

SB0070

Note : Q.54 to 57 are based on following reaction (s) :



54. Name of the process is :
 (1) solvay (2) ammonia-soda
 (3) both correct (4) none is correct

SB0071

55. A is :
 (1) $\text{Ca}(\text{HCO}_3)_2$ (2) CaCO_3
 (3) CaO (4) Na_2CO_3

SB0072

56. B and C are :
 (1) CaO , $\text{Ca}(\text{OH})_2$ (2) $\text{Ca}(\text{OH})_2$, CaCO_3
 (3) CaCO_3 , $\text{Ca}(\text{OH})_2$ (4) $\text{Ca}(\text{OH})_2$, CaO

SB0073

57. D, E and F are :
 (1) NH_3 , NH_4Cl , NH_4HCO_3
 (2) NH_3 , NH_4HCO_3 , NaHCO_3
 (3) NH_4HCO_3 , Na_2CO_3 , NaHCO_3
 (4) None

SB0074

58. A wire of an alkaline earth metal X, burnt in air and dipped in water, a gas 'Y' is evolved X and Y are respectively :-
 (1) Na , NO_2 (2) Be , NO_2
 (3) Mg , CO_2 (4) Mg , NH_3

SB0075

59. Ratio of SiO_2 and Al_2O_3 for a good quality cement.
 (1) 2.5 – 4.0 (2) 1.5 – 2.5
 (3) 3.5 – 5.0 (4) 0.5 – 1.5

SB0112

60. To obtain pure NaCl final solution is saturated with which of the following gas :
 (1) NH_3 (2) N_2 (3) O_2 (4) HCl

SB0113

61. Solvay process cannot be used for the manufacture of K_2CO_3 since
 (1) KHCO_3 is having high lattice energy and Less solubility
 (2) KHCO_3 is having high hydration enthalpy and more solubility
 (3) KHCO_3 is having high MP
 (4) All

SB0114

62. $\text{BeO} + \text{C} + \text{Cl}_2 \xrightarrow{\Delta} \text{A} + \text{CO}$
 Correct statement(s) about 'A'
 (1) It has sp^2 hybridisation of Be in its polymeric form
 (2) It has sp^2 hybridisation in its dimeric form
 (3) Its dimeric structure is non planar
 (4) It has $3\text{c}-2\text{e}^-$ bond in its polymeric structure

SB0115

63. Solubility of carbonate, sulphates, hydroxides of alkaline earth metals has an order
 (1) increase, increase, increase
 (2) decrease, increase, increase
 (3) decrease, decrease, increase
 (4) decrease, decrease, decrease

SB0116

64. Lime water turns milky by the passage of CO_2 and milkyness disappears when excess of CO_2 is passed Compounds responsible for these processes are :
 (1) $\text{Ca}(\text{HCO}_3)_2$, CaCO_3
 (2) CaCO_3 , $\text{Ca}(\text{HCO}_3)_2$
 (3) CaCO_3 , CaO
 (4) $\text{Ca}(\text{OH})_2$, $\text{Ca}(\text{HCO}_3)_2$

SB0117

65. Gypsum $\xrightarrow{393\text{K}} [\text{A}] \xrightarrow{>393\text{K}} [\text{B}]$ Formula of A and B respectively
 (1) CaSO_4 $2(\text{CaSO}_4)\cdot\text{H}_2\text{O}$
 (2) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ $2(\text{CaSO}_4)\cdot\text{H}_2\text{O}$
 (3) $2(\text{CaSO}_4)\cdot\text{H}_2\text{O}$ CaSO_4
 (4) CaSO_4 $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$

SB0118

- 66.** Sodium metal can be used for the drying of
 (1) Ethanol (2) Phenol
 (3) Ammonia (4) Dimethyl ether
- SB0119**
- 67.** Which of the metal is used with aluminium to form air craft parts.
 (1) K (2) Li
 (3) Na (4) None
- SB0120**
- 68.** Which of the following used as a important constituent of glass industry.
 (1) LiCO_3 (2) Na_2CO_3
 (3) MgCO_3 (4) None
- SB0121**
- 69.** Which metal maintain ion balance and nerve impulse conduction in human body
 (1) Na (2) K
 (3) Both 1 and 2 (4) None
- SB0122**
- 70.** _____ is used in manufacturing of artificial silk.
 (1) NaOH (2) RbOH
 (3) KOH (4) LiOH
- SB0123**
- 71.** Which substance is used for making window of x-ray tubes.
 (1) Beryllium (2) Strontium
 (3) Barium (4) Radium
- SB0124**

- 72.** Substance used in purification of sugar :
 (1) $\text{Ca}(\text{OH})_2$ (2) BeO
 (3) BeCl_2 (4) CaO
- SB0125**
- 73.** Select the correct statement regarding s-block element's -
 (1) They are all are reactive metal with low ionisation energies
 (2) The metallic character increases down the group
 (3) They are never found pure in nature
 (4) All of these
- SB0126**
- 74.** Correct order of melting point is ?
 (1) $\text{Be} > \text{Ca} > \text{Sr} > \text{Ba} > \text{Mg}$
 (2) $\text{Ba} > \text{Sr} > \text{Ca} > \text{Mg} > \text{Be}$
 (3) $\text{Be} > \text{Mg} > \text{Ca} > \text{Sr} > \text{Ba}$
 (4) $\text{Be} > \text{Sr} > \text{Ca} > \text{Ba} > \text{Mg}$
- SB0127**
- 75.** Indian salt peter is :-
 (1) KNO_3 (2) LiNO_3 (3) NaNO_3 (4) None
- SB0128**

EXERCISE-I (Conceptual Questions)**ANSWER KEY**

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	3	1	2	2	1	4	4	1	1	1	4	4	4	2	1
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	4	3	4	3	1	4	3	2	3	4	1	3	1	4	2
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	3	4	2	3	4	2	2	3	3	4	3	4	1	3	1
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	3	4	4	3	2	2	4	3	3	2	1	2	4	1	4
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	2	2	3	2	3	4	2	2	3	1	1	4	4	1	1

EXERCISE-II (Previous Year Questions)**AIPMT/NEET****AIPMT-2010**

1. Compound A on heating gives a colourless gas and a residue that is dissolved in water to obtain B. Excess of CO_2 is bubbled through aqueous solution of B, C is formed which is recovered in the solid form. Solid C on gentle heating gives back A. The compound is :-

- (1) Na_2CO_3 (2) K_2CO_3
 (3) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ (4) CaCO_3

SB0077**AIPMT Mains-2011**

2. Which of the following statements is incorrect :-
 (1) NaHCO_3 on heating gives Na_2CO_3
 (2) Pure sodium metal dissolves in liquid ammonia to give blue solution
 (3) NaOH reacts with glass to give sodium silicate
 (4) Aluminium reacts with excess NaOH to give $\text{Al}(\text{OH})_3$

SB0078**NEET-II 2016**

3. The suspension of slaked lime in water is known as
 (1) milk of lime
 (2) aqueous solution of slaked lime
 (3) limewater
 (4) quicklime
4. In context with beryllium, which one of the following statements is **incorrect** ?
 (1) Its salts rarely hydrolyze.
 (2) Its hydride is electron-deficient and polymeric.
 (3) It is rendered passive by nitric acid.
 (4) it forms Be_2C .

SB0081**NEET(UG) 2019 (ODISHA)**

5. Crude sodium chloride obtained by crystallisation of brine solution does not contain
 (1) MgSO_4 (2) Na_2SO_4
 (3) MgCl_2 (4) CaSO_4
6. Which of the alkali metal chloride (MCl) forms its dihydrate salt ($\text{MCl} \cdot 2\text{H}_2\text{O}$) easily ?
 (1) LiCl (2) CsCl
 (3) RbCl (4) KCl

SB0129**SB0130****NEET(UG) 2020**

7. HCl was passed through a solution of CaCl_2 , MgCl_2 and NaCl . Which of the following compound(s) crystallise(s) ?
 (1) NaCl , MgCl_2 and CaCl_2
 (2) Both MgCl_2 and CaCl_2
 (3) Only NaCl
 (4) Only MgCl_2
8. The following metal ion activates many enzymes, participates in the oxidation of glucose to produce ATP and with Na, is responsible for the transmission of nerve signals.
 (1) Potassium (2) Iron
 (3) Copper (4) Calcium

SB0167**SB0168****NEET(UG) 2020(COVID-19)**

9. Identify the correct statement from the following.
 (1) The order of hydration enthalpies of alkaline earth cations
 $\text{Be}^{2+} < \text{Mg}^{2+} < \text{Ca}^{2+} < \text{Sr}^{2+} < \text{Ba}^{2+}$
 (2) Lithium and Magnesium show some similarities in their physical properties as they are diagonally placed in periodic table.
 (3) Lithium is softer among all alkali metals.
 (4) Lithium chloride is deliquescent and crystallises as a hydrate, $\text{LiCl} \cdot \text{H}_2\text{O}$.

SB0169

10. What is the role of gypsum, $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ in setting of cement ? Identify the correct option from the following :
 (1) to fasten the setting process
 (2) to provide water molecules for hydration process
 (3) to help to remove water molecules
 (4) to slow down the setting process

SB0170**NEET(UG) 2021**

11. Among the following alkaline earth metal halides, one which is covalent and soluble in organic solvents is:
 (1) Calcium chloride (2) Strontium chloride
 (3) Magnesium chloride (4) Beryllium chloride

SB0171

12. The structures of beryllium chloride in solid state and vapour phase, are:
 (1) Chain and dimer, respectively
 (2) Linear in both
 (3) Dimer and Linear, respectively
 (4) Chain in both

SB0172

NEET (UG) 2021 (Paper-2)

13. Metal 'M' + air $\xrightarrow{\Delta}$ A $\xrightarrow{H_2O}$ B \xrightarrow{HCl} white fumes. Metal 'M' can be
 (1) Li (2) Mg
 (3) Al (4) All of these

SB0173

14. A solid compound 'X' on heating gives CO_2 has and a residue. The residue mixed with water forms 'Y'. On passing an excess of CO_2 through 'Y' in water, a clear solution 'Z' is obtained. On boiling 'Z', compound 'X' is reformed. The compound 'X' is
 (1) $CaCO_3$ (2) Na_2CO_3
 (3) K_2CO_3 (4) $Ca(HCO_3)_2$

SB0174

15. The value of x is maximum for
 (1) $MgSO_4 \cdot xH_2O$
 (2) $CaSO_4 \cdot xH_2O$
 (3) $BaSO_4 \cdot xH_2O$
 (4) All have the same value of x

SB0175

NEET(UG) 2022

16. Identify the **incorrect** statement from the following
 (1) The oxidation number of K in KO_2 is + 4.
 (2) Ionisation enthalpy of alkali metals decreases from top to bottom in the group.
 (3) Lithium is the strongest reducing agent among the alkali metals.
 (4) Alkali metals react with water to form their hydroxides.

SB0176

17. Match **List-I** with **List-II**.

List-I	List-II
(a) Li	(i) absorbent for carbon dioxide
(b) Na	(ii) electrochemical cells
(c) KOH	(iii) coolant in fast breeder reactors
(d) Cs	(iv) photoelectric cell

Choose the **correct answer** from the options given below :

- (1) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
 (2) (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii)
 (3) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)
 (4) (a)-(iv), (b)-(i), (c)-(iii), (d)-(ii)

SB0177

NEET(UG) 2022 (OVERSEAS)

18. Alkali metals, though white, impart a characteristic colour to the flame because of
 (1) oxidation of metal in the presence of flame.
 (2) excitation of valence electrons.
 (3) gain of electrons,
 (4) excitation and coming back of valence electrons to the original level.

SB0178

Re-NEET(UG) 2022

19. $CaCl_2$ and $Ca(OCl)_2$ are components of :
 (1) gypsum
 (2) Portland cement
 (3) bleaching powder
 (4) lime water

SB0179

EXERCISE-II (Previous Year Questions)

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	4	4	1	1	1	1	3	4	1	1	1	2	4	1	1
Que.	16	17	18	19											
Ans.	1	3	4	3											

EXERCISE-III (Analytical Questions)

1. On dissolving moderate amount of sodium metal in liquid NH_3 at low temperature, which one of the following does **not** occur
- Blue coloured solution is obtained.
 - Na^+ ions are formed in the solution.
 - Liquid NH_3 becomes good conductor of electricity.
 - Liquid ammonia remains diamagnetic.

SB0086

2. NaOH is manufactured by electrolysis of brine solution. The products of the reaction are
- | | |
|------------------------------------|---|
| (1) Cl_2 and H_2 | (2) Cl_2 and $\text{Na}-\text{Hg}$ |
| (3) Cl_2 and Na | (4) Cl_2 and O_2 |

SB0088

3. Which alkali metal on flame test gives red violet colour
- | | |
|--------|--------|
| (1) Li | (2) Cs |
| (3) Na | (4) Rb |

SB0091

4. Alkali metal react with liquid ammonia and form
- | |
|---------------------------------------|
| (1) Metal mixture + H_2 |
| (2) Iron metal mixture + H_2 |
| (3) Metal mixture |
| (4) Metal amide + H_2 |

SB0092

5. Photoelectric effect is maximum in
- | | | | |
|--------|--------|-------|--------|
| (1) Cs | (2) Na | (3) K | (4) Li |
|--------|--------|-------|--------|

SB0093

6. When a standard solution of NaOH is left in air for a few hours,
- a precipitate will form
 - strength will decrease
 - strength will increase
 - the concentration of Na^+ ions remain same
 - all are wrong

SB0094

7. Which is used in purification of air in the space craft.
- Slaked lime
 - Quick lime
 - Potassium superoxide
 - CaCl_2

SB0095**Master Your Understanding**

8. Potassium superoxide is used in oxygen cylinders of space craft as it -
- Absorbs O_2
 - Eliminate moisture
 - Absorbs CO_2 and increases O_2 content
 - Forms ozone

SB0097

9. Compounds of alkaline earth metals are generally less soluble in water than that of alkali metals because of :-
- High hydration energy
 - More covalent character
 - More ionic character
 - Less lattice energy

SB0098

10. Common product of hydrolysis of MO_2 and M_2O_2 type oxides
- | | |
|---|--|
| (1) H_2O_2 , O_2 | (2) H_2O_2 , OH^- |
| (3) H_2 , O_2 | (4) H_2 , OH^- |

SB0131

11. From $\text{Mg}(\text{OH})_2$ to $\text{Ba}(\text{OH})_2$ solubility, thermal stability and basic character
- increase, decrease, increase
 - increase, increase, increase
 - decrease, decrease, decrease
 - increase, increase, decrease

SB0132

12. Which of the following alkaline earth metal does not give dark blue solution in liquid ammonia ?
- | | |
|--------|--------|
| (1) Ca | (2) Na |
| (3) Ba | (4) Be |

SB0173

13. Which of the following used in manufacturing of Borax.
- | | |
|------------------------------|------------------------------|
| (1) MgCl_2 | (2) Na_2CO_3 |
| (3) Li_2CO_3 | (4) None |

SB0134

14. Low solubility of LiF is due to
- High hydration enthalpy
 - High lattice enthalpy
 - High melting point
 - High boiling point

SB0135

15. CaCl_2 , MgCl_2 are impurities in NaCl due to their _____ nature.
 (1) Deliquescent (2) Effloroscent
 (3) Inert (4) All

SB0136

16. Photoelectric cells mainly contain which of the following alkali metal.
 (1) Na (2) Cs
 (3) Li (4) Be

SB0137

17. KO_2 is paramagnetic as it contains one unpaired electron in :-
 (1) $\pi 2p$ (2) $\sigma 2p$
 (3) $\delta 2s$ (4) $\pi^* 2p$

SB0138

18. Color of alkali metal + liq. NH_3 solution in less concentrated and more concentrated forms are :
 (1) Bronze, Green (2) Blue, Bronze
 (3) Blue, Green (4) Bronze, Pink

SB0139

19. For a good quality cement the ratio of lime to total oxides of Si, Al, Fe is close to
 (1) 1.5 (2) 2.5
 (3) 1.0 (4) 2.0

SB0140

20. Gypsum is added to cement as
 (1) It fastens the setting process
 (2) It slows down the setting process
 (3) It increases the oxide content
 (4) None of these

SB0141

21. Which of the following alkali metals chloride form hydrate
 (1) LiCl (2) NaCl
 (3) RbCl (4) KCl

SB0142

22. Which of the following will not form ethynide on reaction with ethyne
 (1) K (2) Na (3) Cs (4) Li

SB0143

23. Which of the following hydroxide will decompose on heating
 (1) NaOH (2) KOH
 (3) LiOH (4) CsOH

SB0144

24. Which of the following not an alkaline earth metal
 (1) Be (2) Mg (3) Ca (4) Sr

SB0145

25. Be and Mg do not impart any colour to Bunsen flame because
 (1) they are very hard
 (2) exhibit diagonal relation with Al and Li respectively
 (3) of their high ionisation potential
 (4) density of these elements are high

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26. Hydrated halide of which of the following metal suffer hydrolysis on heating
 (1) Be (2) Mg
 (3) Ca (4) 1 and 2 both

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27. Beryllium hydroxide dissolves in excess of alkali to give
 (1) $[\text{Be}(\text{OH})_3]^-$
 (2) $[\text{Be}(\text{OH})_4]^{2-}$
 (3) $[\text{Be}(\text{OH})_6]^{4-}$
 (4) does not react with alkali because of its basic nature

SB0148**EXERCISE-III (Analytical Questions)****ANSWER KEY**

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	4	1	4	4	1	2	3	3	2	2	2	4	2	2	1
Que.	16	17	18	19	20	21	22	23	24	25	26	27			
Ans.	2	4	2	4	2	1	4	3	1	3	4	2			