

ILM KI DUNYA**CHEMISTRY :12TH CLASS****CHAPTER – 3****SECTION – MCQ'S****GROUP III – A, AND GROUP IV – A ELEMENTS**

- Which metal is used in the thermite process because of its activity?
GUJ-2014, MTN, DGK, RWP-2015, LHR, DGK, LHR, AJK-2016, SGD, SWL DGK-2017, MTN, LHR-2018
(a) Iron (b) Copper (c) **Aluminium** (d) Zinc
- Aluminium oxide is.
LHR-2014, MTN, RWP, BWP, LHR-2015, MTN, SGD-2017, LHR-2018
(a) Acidic oxide (b) Basic oxides (c) **Amphoteric oxide** (d) None of these
- Chemical composition of colemanite is.
SGD-2014, BWP-2017, MTN-2018
(a) **$\text{Ca}_2\text{BeO}_{11} \cdot 5\text{H}_2\text{O}$** (b) $\text{CaB}_4\text{O}_7 \cdot 4\text{H}_2\text{O}$ (c) $\text{Na}_2\text{B}_4\text{O}_7 \cdot 4\text{H}_2\text{O}$ (d) $\text{CaNaBeO}_9 \cdot 8\text{H}_2\text{O}$
- Which element forms an ion with charge 3+.
MTN, SGD-2015
(a) Beryllium (b) **Aluminium** (c) Carbon (d) Silicon
- Which electronic configuration corresponds to an element of Group III – A, of the periodic table:
(a) **$1s^2, 2s^2, 2p^6, 3s^2, 3p^1$** (b) $1s^2, 2s^2, 2p^6, 3s^2, 3p^6, 4s^2$
(c) $1s^2, 2s^2, 2p^6$ (d) $1s^2, 2s^2, 2p^6, 3s^2, 3p^3$
- Which element among the following belongs to group IV – A of the Periodic Table:
LHR-2016, RWP-2017
(a) Barium (b) Iodine (c) **Lead** (d) Oxygen
- Boric acid cannot be used:
LHR, BWP-2014, SGD-2015, AJK-2016, FBD-2017, GUJ-2018
(a) As antiseptic in medicine (b) For washing eyes (c) **In soda bottle** (d) For enamels and glazes
- Which of the following elements is not present abundantly in earth's crust?
LHR, MTN-2017, SGD-2018
(a) Silicon (b) Aluminium (c) **Sodium** (d) Oxygen
- Tincal is a mineral of.
(a) Al (b) **B** (c) Si (d) C
- The chief ore of aluminium is.
GUJ, RWP-2014, LHR, SGD, BWP, SGD, GUJ-2015, FBD, SGD-2016, DGK-2017, BWP, SWL-2018
(a) Na_2AlF_6 (b) **$\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$** (c) Al_2O_3 (d) $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$
- Asbestos is mineral of.
(a) Calcium (b) Magnesium (c) Silicon (d) **All of these**
- The only non-metal of group III – A is.
(a) **Boron** (b) Aluminium (c) Gallium (d) Thallium
- The compound which form bead in "Borax bead test".
(a) Metal oxide (b) Non-metal boride (c) Metal borate (d) **Metal metaborate**
- Which acid of boron is more stable?
(a) **Orthoboric Acid** (b) Metaboric Acid (c) Tetraboric Acid (d) Pyroboric Acid

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15. The rigid highly under cooled silica is called.
 (a) Silicon (b) Water glass **(c) Vitreous silica** (d) Kaolin
16. Corundum is
(a) Al_2O_3 (b) Na_3AlF_6 (c) Quartz (d) Calcium
17. Which one of the followings is not ore of aluminium.
 (a) Corundum (b) Bauxite **(c) Colemanite** (d) Kaolin
18. Which one of the following elements exhibits s-inert pair effect?
 (a) B (b) Al **(c) Pb** (d) Sc
19. Third abundant element on earth crust is.
 (a) Boron (b) Oxygen **(c) Aluminium** (d) Silicon
20. Boron usually exist in nature as.
 (a) Borides **(b) Oxyborates** (c) Free element (d) It is a artificial element
21. Boric acid is used as eye wash due to its.
 (a) Weakly acidic property **(b) Antiseptic nature**
 (c) Antibiotic nature (d) Weakly basic properties
22. Ethyl alcohol on reacting with orthoboric acid form.
(a) Ethyl borate (b) Boric acid (c) Boron acetate (d) Borax
23. In which compound, the oxidation state of boron is not +3.
 (a) H_2BO_3 (b) $\text{Ca}_2\text{B}_6\text{O}_{11}$ (c) $\text{Na}_2\text{B}_4\text{O}_7$ **(d) Mg_3B_2**
24. A solution of borax in water is.
 (a) Acidic **(b) Alkaline** (c) Neutral (d) None of these
25. Which is not use of Borax.
 (a) Softening of water (b) As medicine for washing eyes
 (c) As flux in metallurgical operations **(d) To make quartz**
26. Ortho-boric acid on strong heating gives.
 (a) Borax **(b) Boron oxide** (c) Metaboric acid (d) Tetraboric acid.
27. Aluminium does not corrode because.
 (a) It is a semi-metal (b) It is a silver shining metal
 (c) It does not react with O_2 **(d) It form a protective layer of Al_2O_3**
28. Al reacts with caustic soda (dil) to form.
(a) Sodium aluminates (b) Aluminium hydroxide
 (c) Aluminum oxide (d) Sodium tetra aluminate
29. Which element burns in nitrogen atmosphere to form nitride?
 (a) Mg (b) Al **(c) Both a and b** (d) None of these
30. Aluminium is used for making petrol and milk storage tanks because it is.
 (a) Conductor (b) Non-magnetic **(c) Excellent reflected** (d) Corrosion resistant
31. Which are correct oxidation states for lead.
 (a) +1 , +2 (b) +3 , +5 **(c) +2, +4** (d) +4 only

32. In which substance silicon is not present.
 (a) Talc (b) Asbestos **(c) Dolomite** (d) Zircon
33. The shape of SiO_2 is.
(a) Tetrahedral (b) Trigonal bipyramid (c) Linear (d) Cubic
34. Which compound of silicon is used as filler in soap?
 (a) SiO_2 **(b) Na_2SiO_3** (c) H_2SiO_3 (d) Silicones
35. Which one of the following is not a property of vitreous silica?
 (a) Transparent (b) Brittle (c) Insulator **(d) High thermal expansion**
36. In transistors, silicon is used as.
 (a) Super conductor **(b) Semi-conductor** (c) Bad conductor (d) Insulator
37. What is not true about SiO_2 ?
 (a) It is a network covalent solid.
 (b) It is attacked by HF
 (c) Each Si atom attached with four oxygen in tetrahedral geometry
(d) It is the basic structural unit of all silicates
38. Silicones are.
 (a) Some salts of sodium (b) Lead Compounds (c) Silicon carbide **(d) Silicones**
39. Which one of the following compounds of lead is red in colour.
 (a) PbO (b) PbO_2 **(c) Pb_3O_4** (d) PbCO_3
40. The composition of white lead is.
 (a) $\text{PbCO}_3 \cdot \text{Pb(OH)}_2$ **(b) $\text{PbCO}_3 \cdot 2\text{Pb(OH)}_2$** (c) $2\text{PbCO}_3 \cdot \text{Pb(OH)}_2$ (d) PbCO_3
41. Litharge is chemically.
(a) PbO (b) PbO_2 (c) Pb_3O_4 (d) $\text{Pb(CH}_3\text{COO)}_2$
42. Lead monoxide is.
(a) Amphoteric (b) Neutral (c) Acidic (d) Basic
43. Which substance is called chrome yellow?
 (a) Pb_2O_4 (b) PbO (c) $2\text{PbCO}_3 \cdot \text{Pb(OH)}_2$ **(d) PbCrO_4**
44. Bauxite is a minerals of
 (a) Boron **(b) Al** (c) Be (d) Mg
45. Tincal is a mineral of.
FBD, MTN, BWP-2014, MTN, LHR, FBD, SWL-2015, BWP-2017, GUJ, RWP-2017
 (a) C **(b) Boron** (c) Al (d) Mg
46. Kaolin is a mineral of.
 (a) B (b) Be (c) Mg **(d) Al** **LHR- 2014**
47. Colemanite is a mineral of.
 (a) Be (b) Al **(c) Boron** (d) Mg
48. Cryolite is a mineral of.
 (a) Be (b) Boron (c) Mg **(d) Al**

49. Formula of Orthoboric acid.
(a) HBO (b) H_2BO_3 (c) HBO_3 (d) H_3BO_3
50. Borax has the chemical formula. BWP-2017
(a) KNO_3 (b) NaNO_3 (c) $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$ (d) $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$
51. Aluminum reacts with nitrogen to form LHR - 2014
(a) AlN (b) Al_2N (c) Al_2N_2 (d) Al_4N_6
52. The aqueous solution Borax. SWL-2014, GUJ-2015, BWP-2018
(a) Acidic (b) Alkaline (c) Amphoteric (d) Manual
53. Which is used in the leather industry?
(a) Borax (b) Boric acid (c) Boric oxide (d) Tetra Boric Acid
54. Which one of following is used in cosmetics? DGK - 2015
(a) Talc (b) Asbestos (c) Sodium sulphate (d) Aluminium sulphate
55. The stable yellow modification of lead chromate is.
(a) Triclinic (b) Hexagonal (c) Tetragonal (d) Monoclinic
56. Which is following is non – metal?
(a) B (b) Al (c) Ga (d) In
57. Which metal is used in the flash light photography because of its activity?
(a) Iron (b) Copper (c) Aluminium (d) Zinc
58. Following is used in making fire proof clothes.
(a) Water glass (b) Borax glass (c) Kaolin (d) Asbestos
59. Ordinary glass is.
(a) Potassium silicate (b) Calcium silicate (c) Sodium silicate (d) Calcium and Sodium silicate
60. In Borax bead test, colour of cupric borates are.
(a) Blue (b) Red (c) Green (d) Colourless
61. Elements having less than four electrons in its valence shell but it is not a metal.
(a) B (b) Al (c) Ga (d) In
62. Valence shell electronic configuration of the elements of group III – A is.
(a) ns^{-1}, np^2 (b) ns^2, np^3 (c) ns^0, np^3 (d) ns^2, np^1
63. Which of the following do not form oxide of Nitrogen on heating?
(a) LiNO_3 (b) NaNO_3 (c) $\text{Ca(NO}_3)_2$ (d) $\text{Mg(NO}_3)_2$
64. Which of the following is non-metal? RWP - 2016
(a) B (b) Al (c) Ga (d) Tin
65. Which of the following has highest boiling point? SGD- 2014
(a) Al (b) Si (c) P (d) S

66. If temperature dropped for 100°C to 0°C , the viscosity of petroleum oil may.
(a) Increase four times (b) Decrease four times **(c) Increase 100 times** (d) Decrease 100 times
67. Aluminium is the most abundant element in the earth's crust.
(a) First (b) Second **(c) Third** (d) Fourth
68. Boron is the member of the Group III – A.
(a) First (b) Second (c) Third (d) Fourth