

ILM KI DUNYA**CHEMISTRY :12TH CLASS****CHAPTER – 1****SECTION – MCQ'S****PERIODIC CLASIFICATION OF ELEMETNS AND PERIODICITY.**

- In the Mendeleev's periodic law the properties of elements are periodic function of their:
(a) Volume (b) Densities (c) Atomic number **(d) Atomic masses**
- The basis of Modern Periodic table is.
(a) Electron affinity (b) Atomic mass (c) Ionization energy **(d) Atomic number**
- The concept on atomic number was introduced by. **(BWP-2015)**
(a) Al-Razi (b) Mendeleev **(c) Moseley** (d) Dobereiner
- How many elements are present in 5th period of the periodic table.
(a) 32 (b) 8 **(c) 18** (d) 28
- The number of groups present in modern periodic table are.
(a) 8 (b) 7 (c) 6 (d) 5
- Transition elements in 4th period are.
(a) 18 **(b) 10** (c) 8 (d) 6
- The basis of Modern periodic law is.
(a) Electron affinity (b) Atomic mass (c) Ionization energy **(d) Atomic number**
- Which is the longest period of periodic table?
(a) 4 (b) 5 **(c) 6** (d) 7
- 6th period contains the number of elements: **(LHR – 2014)**
(a) 18 **(b) 32** (c) 8 (d) 10
- The decrease in atomic sizes is not much prominent across rows containing element of:
(a) s-Block (b) p-Block (c) d-Block **(d) f-Block**
- Smaller the size of an ion. **(GRW-2014)**
(a) Lesser in the degree of hydrogen (b) Lesser is the polarizing power
(c) Greater in the electron affinity **(d) Greater in the energy of hydration**
- Which of the following statement is correct?
(a) Na atom is smaller than Na⁺ (b) Na atom is larger than K atom
(c) F atom is smaller than F⁺ (d) F atom is larger than F⁺
- Mark the correct statement.
(GUJ,LHR,MTN-2014-AJK, SGD-15, LHR,SWL, DGK-16, SWL-18)
(a) Na⁺ is smaller than Na atom (b) Na⁺ is larger than Na atom
(c) Cl⁻ is smaller than Cl atom (b) Cl⁻ (ion) and Cl (atom) are equal in size

14. Keeping in view the size of atoms, which order is correct one.
 (a) $Mg > Sr$ (b) **$Ba > Mg$** (c) $Lu > Ce$ (d) $Cl > I$ **(GRW-14, LHR, GRW, SGD, MTN-15-DGK-17)**
15. Keeping in view the size of atoms which order is correct.
 (a) $N > P$ (b) $Br > I$ (c) **$Ca > Be$** (d) $Mg > Sr$ **(MLN - 2014)**
16. Which of the following elements has lowest ionization energy.
 (a) **Beryllium** (b) Boron (c) Carbon (d) Oxygen
17. Among the elements of VA group which has highest ionization energy.
 (a) **Nitrogen** (b) Phosphorus (c) Antimony (d) Bismuth
18. Choose the correct statement.
 (a) **Metallic Character increase down the group**
 (b) Metallic character decrease down the group
 (c) Does not change
 (d) First increase then decrease
19. Which of the following element has lowest melting point.
 (a) Beryllium (b) **Magnesium** (c) Calcium (d) Barium **(LHR - 2014)**
20. Which of the following has the highest boiling point.
 (a) **Be** (b) Ra (c) Ba (d) Rn
21. Mark the correct statement.
 (a) All lanthanides are present in the same group
 (b) All Halogens are present in the same period
 (c) **All the alkali Metals are present in the same group**
 (d) All the noble gases are present in the same period **(GRW-2014, BWP-2017)**
22. Which statement is incorrect.
 (a) All the metals are good conductor of electricity.
 (b) All metals are good conductor of heat
 (c) All the metals form positive ion
 (d) **All the metals form acidic oxide** **(SGD-2015, DGK-2016)**
23. Which ion will have maximum value of heat of hydration?
 (a) Na^{+1} (b) Cs^{+1} (c) Ba^{+2} (d) **Mg^{+2}** **(GRW, RWP - 2017)**
24. Which of the following ion has maximum hydration energy.
 (a) Li^{+} (b) Na^{+} (c) K^{+} (d) **Ca^{+2}**
25. The intermediate hydride is.
 (a) CsH (b) **ZnH_2** (c) BH (d) HF
26. Which one is ionic hydride?
 (a) **NaH** (b) AlH_3 (c) NH_3 (d) CH_4
27. The hydrides of group I-A are.
 (a) **Ionic** (b) Covalent (c) Metallic (d) Interstitial
28. Which of the following metal gives an amphoteric oxide?
 (a) Ca (b) Fe (c) Cu (d) **Zn** **(DGK-2014, 2017)**

29. Coinage metals are present in the periodic table in group.
 (a) I-A (b) **I – B** (c) II – A (d) II – B
30. The oxides of non – metals are.
 (a) **Acidic** (b) Amphoteric (c) Basic (d) Neutral
31. Which one is amphoteric oxide. **(BWP-2014, LHR- 2016)**
 (a) SO_3 (b) CaO (c) **ZnO** (d) Li_2O
32. Zinc Oxide is an example of.
 (a) Neutral (b) **Amphoteric** (c) Acidic (d) Basic
33. Which one of the following elements form weakly acidic oxide.
 (a) Aluminium (b) **Phosphorous** (c) Sulphur (d) Chlorine
34. The element which forms Amphoteric oxide is.
 (a) **Beryllium (Be)** (b) Sodium (Na) (c) Magnesium (Mg) (d) Calcium (Ca)
35. Which of the following form amphoteric oxide.
 (a) Na (b) Mg (c) O (d) **Zn**
36. Which oxide is amphoteric in nature? **(FBD – 2015)**
 (a) **Al_2O_3** (b) Cl_2O_7 (c) MgO (d) SO_3
37. The oxides of Beryllium are. **(MLN-2014, SGD- 2015)**
 (a) Acidic (b) Basic (c) **Amphoteric** (d) None of these
38. Aluminium oxide is
 (a) Acidic oxide (b) Basic oxide (c) **Amphoteric oxide** (d) None of these
39. Which of the element gives acidic oxide?
 (a) **N** (b) As (c) Sb (d) Bi
40. Which of the following elements form acidic oxide only? **(DGK-2014)**
 (a) Cd (b) Al (c) Sn (d) **Br**
41. Amphoteric oxide is formed by.
 (a) Ca (b) Fe (c) **Zn** (d) Cu
42. Aluminium oxide is.
 (a) **Amphotric** (b) Basic (c) Acidic (d) Neutral
43. Hydrogen resembles in properties with groups.
 (a) I-A, V-A , VII-A elements (b) **I-A, IV-A, VII-A elements**
 (c) I-A,II-A,V-A elements (d) I-A,II-A elements
44. The most metallic element from the following is.
 (a) Nitrogen (b) Oxygen (c) Antimony (d) **Bismuth**
45. The Ionization energy of calcium is.
 (a) Lower than that of Barium (b) **Lower than that of Magnesium**
 (c) Higher than that of Beryllium (d) Lower than that of Strontium

46. Who gave the law of Triads in 1829? **(AJK-2016)**
 (a) Dobereiner **(b) Mosely** (c) Newland (d) Mendeleev
47. In modern periodic table 6th period contains elements? **(LHR – 2014)**
 (a) 8 (b) 18 (c) 10 **(d) 32**
48. Which of the following are alkaline earth metals? **(LHR – 2014)**
(a) Be, Mg, Ca (b) Li, Na, K (c) Fe, CO, Ni (d) B, Al, Ga
49. The hydrides of Group IA are. **(SWL-2014)**
(a) Ionic (b) Covalent (c) Metallic (d) Interstitial
50. Which one is ionic hydride? **(RWP – 2014)**
 (a) NaH (b) AlH₃ **(c) NH₃** (d) CH₄
51. Which one is an incomplete period? **(BWP – 2016)**
 (a) 4th (b) 5th (c) 6th **(d) 7th**
52. Number of elements in the first period of the periodic table is. **(LHR – 2016)**
(a) 2 (b) 8 (c) 14 (d) 18
53. Which is the longest period of periodic table. **(RWP – 2016)**
 (a) 4 (b) 5 **(c) 6** (d) 7
54. Which of the following element has lowest ionization energy? **(Lhr-2014, SGD-2017)**
(a) Beryllium (b) Boron (c) Carbon (d) Oxygen
55. Which of the following has highest M.P? **(SGD-2016)**
 (a) Aluminium **(b) Silicon** (c) Phosphorus (d) Sulphur
56. Which of the following has the highest hydration energy? **(SGD-14,DGK-16,LHR-2017)**
 (a) Li⁺ (b) Na⁺ (c) K⁺ **(d) Mg⁺**
57. The element of 2nd period, which has highest ionization energy from the following is. **(MTN-2017)**
 (a) Be (b) C **(c) N** (d) O
58. The basis of modern periodic table is. **(DGK, LHR-2014)**
 (a) Electron affinity (b) Atomic mass (c) Ionization Potential **(d) Atomic No.**
59. Elements of Group IIA are called. **(F.B, BWP- 2014)**
 (a) Alkali metal **(b) Alkaline earth metal** (c) Coinage metal (d) Halogens
60. Which one of the following is intermediate hydride. **(F.B-2016)**
 (a) LiH **(b) MgH₂** (c) CaH₂ (d) SrH₂
61. Which statement is correct? **(BWP-2014)**
(a) Hydrogen resembles in properties with I-A, IV-A element.
 (b) Hydrogen resembles in properties with III-A, IV-A and V-A element.
 (c) Hydrogen resembles in properties with II-A, IV-A and VI-A element.
 (d) Hydrogen resembles in properties with II-A, III-A and VII-A element.

62. In which region of periodic table, atomic radii are greater.
(a) Lower left (b) Lower right (c) upper left (d) Upper right
63. Which element has greater melting point.
 (a) Be (b) B **(c) C** (d) N
64. Among halogens, the highest boiling point is of.
 (a) F (b) Cl (c) Br **(d) I**
65. Which one is correct about hydration energy?
 (a) $\text{Na}^+ > \text{Mg}^{2+}$ (b) $\text{Mg}^{2+} > \text{Al}^{3+}$ (c) $\text{Al}^{3+} < \text{Na}^+$ (d) $\text{Al}^{3+} > \text{Na}^+$
66. Which oxide is least basic.
 (a) MnO (b) Mn_2O_3 (c) MnO_2 **(d) Mn_2O_7**
67. Keeping in view the size of atoms, which order is the correct one.
 (a) $\text{Mg} > \text{Sr}$ **(b) $\text{Ba} > \text{Mg}$** (c) $\text{Lu} > \text{Ce}$ (d) $\text{Cl} > \text{I}$
68. Mark the correct statement.
(a) Na^+ is smaller than Na atom (b) Na^+ is larger than Na atom
 (c) Cl^- is smaller than Cl atom (d) Cl^- (ion) and Cl (atom) are equal in size
69. Mark the correct statement.
 (a) All lanthanides represent in the same group
 (b) All halogens are present in the same period.
(c) All the alkali metals are present in the same group.
 (d) All the noble gases are present in the same period.
70. Which statement is incorrect?
 (a) All the metals are good conductors of electricity
 (b) All the metals are good conductors of heat
 (c) All the metals form positive ions
(d) All the metals form acidic oxides
71. Hydrogen resembles in properties with
(a) IA, IV A and VII A elements
 (b) IIIA, IV A and VA elements
 (c) II A, IV A and VI A elements
 (d) IIA, IIIA and VII A elements
72. Ionization energy of calcium is.
 (a) Lower than that of barium
(b) Lower than that of magnesium
 (c) Higher than that of beryllium
 (d) Lower than that of strontium
73. Electron affinity is measure of energy.
 (a) Required to remove the electron
(b) Released by adding an electron
 (c) Required to excite an electron
 (d) Released by removing an electron

74. Mark the incorrect statement.
 (a) Metallic character increase down the group
(b) Metallic character increases from left to right along a period
 (c) Metallic character decreases from left to right along a period
 (d) Metallic character remains the same down the group
75. Melting points of halogens
 (a) Decrease down the group
(b) Increase down the group
 (c) Remain the same throughout the group
 (d) First increase and then decrease down the group
76. In which group of periodic table is the element which has atomic number 14?
 (a) II **(b) IV** (c) III (d) VI
77. Which one of the following sets has coinage metals in it?
 (a) Cu, Hg, Au **(b) Cu, Ag, Au** (c) Ag, Au, Hg (d) Cu, Fe, Au
78. Fluorine is in group VII A of Periodic Table. Its chemistry will most closely resembles that of.
 (a) Argon (b) Boron **(c) Iodine** (d) Sulphur
79. What are the total numbers of periods in the modern periodic table?
 (a) 3 (b) 5 **(c) 7** (d) 8
80. What criteria did Mendeleev use in arranging his periodic table?
(a) Atomic mass (b) Atomic number (c) Mass number (d) Density
81. Majority of the elements of the Periodic Table are.
 (a) Semi-metals (b) Non-metals **(c) Metals** (d) Noble metals
82. Transition elements are those
 (a) Which comes before uranium
 (b) Which comes after uranium
 (c) Which are prepared artificially
(d) Which are in between s-block and p-block elements
83. In which block of periodic table non-metals are present.
 (a) s **(b) p** (c) d (d) f
84. In which one of the following sets do all three particles have same number of total electrons?
 (a) F^- , Cl^- , Br^- (b) Li^+ , Na^+ , K^+ **(c) N^{3-} , O^{3-} , F^-** (d) Na^+ , Mg^{2+} , K^+
85. In a period, from left to right in the periodic table, the size of atom generally.
 (a) Increases **(b) Decreases** (c) Remains constant
 (d) First increases upto the middle of period and then decreases.
86. As you proceed across a period in the periodic table the first ionization energy.
 (a) Decreases **(b) Increases** (c) Remains constant
 (d) First increases upto the middle of period and then decreases.
87. Which class of elements shows low value of first ionization potential?
(a) Alkali metals (b) Alkaline earth metals
 (c) Halogens (d) Noble gases

88. Which one of the following elements has the largest second ionization energy?
 (a) O (b) Na (c) F (d) Ne
89. Which one of the following is a metalloid?
 (a) Sulphur (b) Antimony (c) Mercury (d) Zinc
90. The first ionization energy of Na, Mg, Al and Si are in the order of.
 (a) $\text{Na} < \text{Mg} < \text{Al} < \text{Si}$ (b) $\text{Na} > \text{Mg} > \text{Al} > \text{Si}$ (c) $\text{Na} > \text{Mg} > \text{Al} < \text{Si}$ (d) $\text{Na} < \text{Mg} > \text{Al} < \text{Si}$
91. A cross a period from left to right in the periodic table, the melting and boiling point.
 (a) Decreases (b) Increase (c) Remains constant
 (d) First increase upto the middle of period and then decreases
92. Variable valency is generally exhibited by.
 (a) Transition elements (b) Alkali metals (c) s-block elements (d) Gaseous elements
93. A Cross the period of periodic table, shielding effect.
 (a) Increase (b) Decreases (c) remains constant
 (d) First increases upto the middle than decreases
94. In which group, melting point and boiling point increases downward in a group.
 (a) IA (b) II A (c) VII A (d) both a and b
95. In which compound, oxidation state of sulphur is +6.
 (a) H_2S (b) H_2SO_4 (c) H_2SO_3 (d) SO_2
96. Which element when react with chlorine form polymeric halide.
 (a) Na (b) Be (c) Ba (d) P
97. Ionic hydrides react with water to form.
 (a) Proton (b) Hydride ions (c) Hydroxide ions (d) Hydronium ions
98. Element of which group reacts with hydrogen and form ionic hydrides.
 (a) II A (b) IV A (c) V A (d) VI A
99. Which one of the following elements burns in air to form an oxide which, when shaken with water, gives a solution with a pH greater than 7?
 (a) Carbon (b) Magnesium (c) Sulphur (d) Hydrogen
100. Which one of the following oxides is amphoteric in nature?
 (a) MgO (b) Na_2O (c) SO_2 (d) ZnO
101. The oxides of metals are generally.
 (a) Acidic (b) Basic (c) Neutral (d) Amphoteric
102. Which property of hydrogen not resemble to alkali metals.
 (a) Electronic configurations (b) Oxidation state
 (c) Reaction with halogen (d) Metallic nature
103. Which oxide is more basic in nature?
 (a) BeO (b) MgO (c) CaO (d) BaO