ECAT Chemistry Chapter 12 Periodic Classification of Elements and Periodicity Online Test

Sr	Questions	Answers Choice
1	Ionic hydrides are generally	A. Liquid at room temperature B. Good electrical conductors C. Good reducing agents D. Easily reduced
2	The horizontal rows in the periodic table are called periods. The number of period are	A. 5 B. 6 C. 7 D. 8
3	The attraction that an atom exerts on a pair of electrons that are being shared with another atom for forming covalent bond is referred to as its	A. Electron affinity B. Electronegativity C. Ionisation energy D. Valency
4	Which of the following represents elements in order of increasing atomic size?	A. I, Br, Cl B. Na, Mg, C C. C, N, O D. Li, Na, K
5	Which orbital is in the process of completion in case of transition elements	A. p-orbital B. f-orbital C. d-orbital D. s-orbital
6	Which of the following sets of atomic numbers belong to that of the alkali metals?	A. 1,12,30,4,62 B. 37,19,3,55 C. 9,17,35,53 D. 12,20,56,88
7	In the modern long form of the periodic table elements are arranged in the increasing order of	A. Atomic mass B. Atomic number C. Mass number D. Isotopic number
8	According to the periodic law, the chemical properties of the elements are periodic functions of their	A. Density B. Atomic number C. Atomic mass D. Mass number
9	The elements of group IA are called	A. Chalocogens B. Halogens C. Alkali metals D. Alkaline earth metals
10	Variable valency is generally exhibited by	A. Normal elements B. Transition elements C. Metallic elements D. None of these
11	Which of the following elements should be the least metallic in character	A. Rb B. In C. Te D. I
12	The statement that the properties of every eight elements are similar to the first is the law of	A. Dobereiner B. Newland C. Mendeleev D. L. Meyer
13	Among the elements given below, the one with highest electropositivity is	A. Cu B. Cs C. Cr D. Ba
14	Which of the following is most electronegative?	A. Carbon B. Silicon C. Lead D. Tin
15	Ionization potential increases in moving from left to right in a period	A. Because nuclear charge increase B. Because atomic size decrease C. Both (a) and (b) D. Because atomic size increases

16	Which is the transition element among the following	A. B B. Al C. Cu D. Cs
17	The hydration energy is the heat evolved when one mole of gaseous ion is dissolved in water. The hydration energy of an ion	A. Increases with increase of charge to mass ratio B. Decreases with increase of charge to mass ratio C. Depends on sign of charge +ve or -ve D. Depends upon the solvent
18	Elements in the same family have	A. Same atomic number B. Molecular wt same C. Same chemical properties D. Same electronic configuration
19	Each vertical column of the periodic table includes elements with chemical characteristics that are in general	A. Identical B. Similar C. Different D. Similar as well as different
20	Which is the longest period of the periodic table	A. 5th B. 7th C. 6th D. 2nd
21	Which of the following oxides is amopheric in character?	A. CaO B. CO₂ C. SiO₂ D. SnO₂
22	NaH is	A. Ionic hydride B. Complex hydride C. Covalent hydride D. Interstitial hydride
23	The number of elements in the first, second and third period are	A. 2, 8, 18 B. 8, 2, 18 C. 2, 18, 8 D. 2, 8, 8
24	The valency, ionization energy and electrongativity of elements are related to its	A. Atomic number B. Properties C. Atomic weight D. Family group
25	The coinage metals are	A. Ni, Pd, Pt B. Cu, Ag, Au C. Zn, Al, Pb D. Fe, Si, Sn
26	The valence shell of hydrogen is half filled like those of	A. IV - A B. VIA C. V - A D. VIIA
27	Which of the following is an inert gas?	A. H₂ B. O₂ C. N₂ D. Argon
28	Which of the following metal requires radiation of highest frequency to cause emission of electrons?	A. Na B. Mg C. K D. Ca
29	Which species represented by the following formula has the largest radius	A. P³⁻ B. Cl⁻ C. A_r D. K⁺
30	The energy absorbed when an electron is added to a gaseous atom to form a gaseous ion is called	A. Electron affinity B. Ionization energy C. Both of these D. None of these
31	Which of the following isoelectronic ions has the lowest ionization energy?	A. K⁺ B. Ca²⁺ C. Cl⁻ D. S²⁻
32	Ionization energy depends upon	A. Nuclear charge B. Atomic size C. Shielding effect D. All of the above

33	In the modern periodic table the elements are placed in the ascending order of their	A. Atomic masses B. Melting points C. Boiling points D. Atomic numbers
34	An element of the third period (Na to S) is heated in chlorine. The product is purified and then added to water. The resulting solution is found to be neutral. What is the element	A. Sodium B. Aluminium C. Silicon D. Phosphorus
35	Although hydrogen resemble with the elements of group IA, IVA and VII but it is usually placed in	A. Group IA B. Group IV A C. Group VII D. Group VIII
36	$NaBH_4$and $LialH_4$are	A. Ionic hydrides B. Covalent hydrides C. Interposal hydrides D. Complex hydrides
37	The elements with atomic numbers 9, 17, 35, 53, 85 an all	A. Noble gases B. Halogens C. Heavy metals D. Light metals
38	The fourteen elements following actinium are known as	A. Lanthanones B. Lanthanides C. Rare earths D. Actinides
39	Keeping in view the size of atoms, which order is the correct one	A. Mg > Sr B. Ba > Mg C. Lu > Ce D. Cl > I
40	The elements of sub-group A are called	A. Transition elements B. Main elements C. Typical elements D. Rare earth elements
41	Which of the following oxides is unlikely to dissolve in aqueous hydroxide	A. Al₂O₃ B. MgO C. SO₂ D. SlO₂
42	Which is not interstitial hydride	A. LaH B. VH C. TaH D. None
43	Variable valency is characteristic of	A. Halogen B. Transition elements C. Alkali metals D. Noble gas
44	The oxides of which of the following elements will be acidic in character	A. Mg B. Rb C. Li D. Cl
45	Which of the following has greatest tendency to lose electron?	A. F B. Fr C. S D. Be
46	Two elements whose electronegativities are 1.2 and 3.0, the formed between them would be	A. Ionic B. Covalent C. Coordinate D. Metallic
47	Which of the following has highest first ionization potential?	A. Carbon B. Oxygen C. Nitrogen D. Boron
48	Which of the following does not exhibit the periodicity in properties of the elements?	A. Ionisation energy B. N/P ratio C. Electronegativity D. Atomic radius
49	The alkali metal which is liquid at 15°C is	A. K B. Cs C. Na D. None
50	From $_{39}Y$ to $_{48}Cd$ are called	A. Transition elements B. Outer transition elements C. Inner transition elements D. 2nd transition series

51	The ionization potential is lowest for the	A. Halogens B. Inert gases C. Alkaline earth metals D. Alkali metals
52	Which of the following element has the maximum electron affinity?	A. F B. S C. I D. Cl
53	Among O, C, F, Cl, Br, the correct order of increasing radii is	A. F O C Cl Br B. F C O Cl Br C. F Cl Br O C D. C O F Cl Br
54	Which of the following pairs are chemically dissimilar?	A. Na and K B. Ba and Sr C. Zr and Hf D. Ca and Zn
55	Which among the following species has the highest ionization energy?	A. Ne B. F C. Li D. B
56	Which of the following species has the highest ionization potential?	A. Ne B. Al⁺ C. Mg⁺ D. Li⁺
57	Which of the following discoveries resulted in a version of the Mendeleefs periodic law	A. The nucleus of atom by Rutherford B. The elements polonium and radium by the Curies C. Atomic numbers by Moseley D. x-rays by Roentgen
58	What is the nature of SO_2	A. Basic B. Strongly acidic C. Weakly acidic D. Amphoteric
59	In sixth period 14 of its transition elements are called	A. Lanthanides B. Actinides C. Radioactive elements D. None
60	The most distinctive character among the elements is their division into	A. Metals and non-metals B. Solids, liquids and gases C. Atoms and molecules D. Active and inactive elements
61	According to Mendleev, the physical and the chemical properties are the periodic function of their	A. Atomic number B. Atomic mass C. Atomic wt D. None
62	Which of the following is not true for metalloids	A. They are borderline elements that exhibit both metallic and non-metallic properties to some extent B. They usually act as electron donors with non-metals and as electron acceptors with metals C. Some of these elements are boron, silicon and germanium D. They are good conductors of heat and electricity
63	Which is true about the electronegativity order of the following?	A. P > Si B. C > N C. Br > Cl D. Sr > Ca
64	In a group, the ionization energy	A. Increase B. Decreases C. Remain constant D. First increases then decreases
65	Which of the following elements is/are not liquid at 30°C?	A. Ga B. Hg C. Ge D. Cs
66	The correct order of 2nd I.P. of C,N,O and F is	A. O > F > N > C B. O > N > F > C C. C > N > O > F D. F > O > N > C
		A. The ionic radius of the

67	Which statement explains the observation that magnesium hydroxide dissolve in aqueous ammonium chloride, but not in aqueous sodium chloride	NH₄⁺ion is similar to that of Mg²⁺but not that of Na⁺ B. NH₄Cl dissociates less fully than NaCl C. The ions Na⁺and Mg²⁺are isoelectronic (have the same number of electrons) D. The ion NH⁺₄acts as an acid
68	The amount of energy required to remove an electron from an atom of an element in the gaseous state is called	A. Electron affinity B. Electronegatively C. Ionization energy D. None of these
69	Gradual addition of electronic shells in the nobel gases causes a decrease in their	A. Ionization energy B. Atomic radius C. Boiling point D. Density
70	Which of the following statement about fluorine is not correct?	A. Electron affinity of chlorine is greater than that of fluorine B. Bond energy of fluorine is less than that of chlorine C. Fluorine cannot be prepared by electrolysis of fused metal fluorides D. Fluorine does not form oxoacid
71	The fourth period contains elements	A. 8 B. 16 C. 18 D. 32
72	The melting point is lowest for	A. Be B. Mg C. Ca D. Sr
73	Which is the most volatile compound	A. HI B. HCl C. HBr D. HF
74	Rare earth elements are	A. s-block elements B. p-block elements C. d-block elements D. f-block elements
75	The chloride of element Q is hydrolysed by water to form an acidic solution and its oxide reacts with acid to form a salt. What cold be the element Q	A. Magnesium B. Aluminium C. Silicon D. Phosphorus
76	A pair of elements in the same family in the periodic classification is	A. Cl and C B. Ca and Al C. N and Ne D. Na and K
77	Which element should have the greatest value for electronegativity when combined with hydrogen	A. Na B. Si C. S D. Cl
78	Which has highest 1st I.E.	A. Br B. Cl C. F D. I
79	Which of the following statement about electron affinity of two elements is correct	A. Carbon has greater than oxygen B. Sulphur has less than oxygen C. Iodine has greater than bromine D. Bromine has less than chlorine
80	Alkali metals in each period have	A. Smallest size B. Lowest IE C. Highest IE D. Highest electronegativity
81	Which of the following elements is most electronegative?	A. Oxygen B. Chlorine C. Nitrogen D. Fluorine
82	All the elements belongs to the 2nd period are	A. Normal elements B. Transition elements C. Stable elements D. Halogens

83	Of the given alkali metals, the one with smallest size is	A. Rb B. Cs C. K D. Na
84	Eka-aluminium and Eka-silicon are known as	A. Gallium and Germanium B. Aluminium and silicon C. Iron and sulphur D. Proton and silicon
85	In a group form top to bottom, the hardness of alkali metals	A. Remains unchanged B. Increases C. Decreases D. None
86	The element with highest electron affinity among the halogen is	A. F B. Cl C. Br D. I
87	Which among the following elements have lowest value of IE_1?	A. Pb B. Sn C. Si D. C
88	Which of the following is a member of -block	A. Zn B. Al C. B D. Br
89	The number of groups in the periodic table is	A. 6 B. 7 C. 8 D. 9
90	Na_2O is	A. Acidic B. Basic C. Neutral D. Amphoteric
91	The correct arrangement of increasing order of atomic radius among Na, K, Mg, Rb is	A. Mg < K < Na < Rb B. Mg < Na < K < Rb C. Mg < Na < Rb < K D. Na < K < Rb < Mg
92	The valency of noble gases, in general, is	A. Zero B. One C. Three D. Two
93	The structure of complex hydrides is	A. Tetrahedal B. Trigonal C. Octahedral D. Square planar
94	Li, Be, B, C, O, Fl Ne are elements of	A. Second period B. First period C. Third period D. Fourth period
95	Which of the following ion has the highest value of ionic radius?	A. Li⁺ B. F⁻ C. O²⁻ D. B³⁺
96	In the periodic table, the element with atomic number 16 will be placed in the group	A. Fourteen B. Sixteen C. Thirteen D. Fifteen
97	Which of the following does not reflect the periodicity of elements?	A. Bonding behaviour B. Electronegativity C. Ionisation potential D. Neutral/proton ratio
98	The positive ion is always smaller than the neutral atom while the negative ion is always bigger than the neutral atom. The atomic and ionic radii of Na, F, Na^+, $F^-$are in ppm	A. Na F Na⁺ F⁻ 157 72 95 136 B. Na F Na⁺ F⁻ 157 95 172 136 C. Na F Na⁺ F⁻ 72 95 136 157 D. Na F Na⁺ F⁻ 157 136 95 72
99	Gradation in properties in the periods of periodic tables are due to change in	A. Atomic weight B. The number of electrons C. Number of protons D. Electronic configuration

100	The elements of f-block are also known as	A. Inner-transition B. Outer transition C. Normal elements D. Alkaline earth metals
101	Which of the following elements have the largest radius	A. F B. Cl C. Br D. I
102	Electron affinity depends on	A. Atomic size B. Nuclear charge C. Atomic number D. Atomic size and nuclear charge both
103	The number of elements in the 4th periods of periodic table is	A. 8 B. 10 C. 18 D. 32
104	The period table contains elements in vertical column. these vertical column are called	A. Groups B. Periods C. Blocks D. Sub group
105	The oxides of electronegative elements are	A. Basic B. neutral C. Acidic D. Amphoteric
106	Transition elements have valence electrons in	A. s-orbital B. p-orbital C. d-orbital D. f-orbital
107	From left to right, atomic radii of transition elements	A. Increases B. Decreases C. Remain same D. None of the above
108	Which of the following pair of atomic numbers represents s-block elements?	A. 7, 15 B. 6, 12 C. 9, 17 D. 3, 20
109	The coinage metals are	A. Ni, Pd, Pt B. Cu, Ag, Au C. Zn, Al, Pb D. Fe, Si, Sn
110	What is the nature of Al_2O_3	A. Acidic B. Basic C. Amphoteric D. Neutral
111	The atomic radius increases as we move down a group because	A. Effective nuclear charge increases B. Atomic mass increases C. Additive electrons are accommodated in new electron level D. Atomic number increases
112	Which of the following has highest oxidation potential	A. Be B. Li C. Na D. Ca
113	Doberiner arranged the similar elements into	A. Pairs B. Triads C. Triplets D. Rows
114	The element with atomic number 55 belongs to which block of the periodic table	A. s-block B. p-block C. d-block D. f-block
115	Which of the following statements is most appropriate about effective nuclear charge? It depends upon	A. The shielding constant B. The atomic number C. The charge on the nucleus D. Both the nuclear charge and the shielding constant
116	The element with atomic number 26 will be found in group	A. 2 B. 8 C. 6 D. 10

117	Number of elements present in 5th period is	A. 8 B. 18 C. 32 D. 24
118	The classify the elements, Newland gave the idea of	A. Octaves B. Triads C. Atomic volume D. Atomic mass
119	Number of elements in the first period of the periodic table are	A. Two B. Four C. One D. Eight
120	Among the following elements which one has the highest value of first ionization potential?	A. Oxygen B. Argon C. Barium D. Cesium
121	How does the ionization energy of 1st group elements vary?	A. Increases down the group B. Decreases down the group C. Remains unchanged D. Variation is not regular
122	Mark the correct statement	A. Na⁺is smaller than Na atom B. Na⁺is larger than Na atom C. Cl⁻is the smaller than Cl atom D. Cl⁻(ion) and Cl (atom) are equal in size
123	The electropositive elements from	A. Acidic oxides B. Basic oxides C. Neutral oxides D. None
124	Indicate the correct statement	A. All lanthanidees 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 int he same period
125	According to Mendeleev, the properties of the elements are periodic function of their	A. Atomic number B. Atomic volumes C. Atomic masses D. Atomic densities
126	Who gave the concept of atomic number	A. Newton B. Mosley C. Dalton D. Newland
127	The IA elements are called	A. Alkaline earth metal B. Alkaline metals C. The halogens D. The inert gases
128	The correct order of electron affinity among the following is	A. F > Cl > Br B. Br > Cl > F C. Cl > F > Br D. F > Br > Cl
129	The valence shell electronic structure of an element is ns^2np^5. The element will along to the group of	A. Alkali metals B. Inert metals C. Noble gases D. Halogen
130	For the representative elements from left to right across a period in the periodic table, the electron effinity of the atom generally	A. Increases B. Remains constant C. Decreases D. Not clear
131	In a period, melting points of elements	A. Increases B. Decreases C. Remain constant D. First increases then decreases