

INORGANIC CHEMISTRY

NEET

CRASH COURSE

**GENERAL CHEMISTRY
&
PERIODIC PROPERTIES**

SMART ACHIEVERS
JEE | NEET | FOUNDATION

587, Nitikhand-1, Indirapuram, Gzb.

7292077839 / 7292047839 | smartachievers.online

A Unit of SMARTACHIEVERS LEARNING Pvt. Ltd., Delhi

SUMMARY

In this Unit, you have studied the development of the **Periodic Law** and the **Periodic Table**. Mendeleev's **Periodic Table** was based on atomic masses. Modern **Periodic Table** arranges the elements in the order of their atomic numbers in seven horizontal rows (**periods**) and eighteen vertical columns (**groups** or **families**). Atomic numbers in a period are consecutive, whereas in a group they increase in a pattern. Elements of the same group have similar **valence shell** electronic configuration and, therefore, exhibit similar chemical properties. However, the elements of the same period have incrementally increasing number of electrons from left to right, and, therefore, have different valencies. Four types of elements can be recognized in the periodic table on the basis of their electronic configurations. These are **s-block**, **p-block**, **d-block** and **f-block** elements. **Hydrogen** with one electron in the 1s orbital occupies a unique position in the periodic table. **Metals** comprise more than seventy eight per cent of the known elements. **Nonmetals**, which are located at the top of the periodic table, are less than twenty in number. Elements which lie at the border line between metals and non-metals (e.g., Si, Ge, As) are called **metalloids** or **semi-metals**. Metallic character increases with increasing atomic number in a group whereas decreases from left to right in a period. The physical and chemical properties of elements vary periodically with their atomic numbers.

Periodic trends are observed in **atomic sizes, ionization enthalpies, electron gain enthalpies, electronegativity** and **valence**. The atomic radii decrease while going from left to right in a period and increase with atomic number in a group. Ionization enthalpies generally increase across a period and decrease down a group. Electronegativity also shows a similar trend. Electron gain enthalpies, in general, become more negative across a period and less negative down a group. There is some periodicity in valence, for example, among representative elements, the valence is either equal to the number of electrons in the outermost orbitals or eight minus this number. **Chemical reactivity** is highest at the two extremes of a period and is lowest in the centre. The reactivity on the left extreme of a period is because of the ease of electron loss (or low ionization enthalpy). Highly reactive elements do not occur in nature in free state; they usually occur in the combined form. Oxides formed of the elements on the left are basic and of the elements on the right are acidic in nature. Oxides of elements in the centre are amphoteric or neutral.

IMPORTANT FACTS TO REMEMBER

1. Lowest electronegativity : Cs
2. Highest electronegativity : F
3. Highest ionisation potential : He
4. Lowest ionisation potential : Cs
5. Lowest electron affinity : Noble gases
6. Highest electron affinity : Chlorine
7. Least electropositive element : F
8. Lowest m. pt. metal : Hg
9. Highest m. pt. and b. pt. metal : W (Tungsten)
10. Lowest m. pt. and b. pt. non metal : He
11. Notorious element : Hydrogen
12. Lightest element : Hydrogen
13. Smallest atomic size : H
14. Largest atomic size : Cs
15. Largest anionic size : I⁻
16. Smallest cation : H⁺
17. Most electropositive element : Cs
18. Element with electronegativity next to Fluorine : Oxygen
19. Group containing maximum no. of gaseous elements in periodic table : Zero group
20. Total number of gaseous elements in periodic table : 11 (H, N, O, F, Cl, He, Ne, Ar, Kr, Xe, Rn)
21. Total number of liquid elements in periodic table : 6 (Ga, Br, Cs, Hg, Fr, Uub)
22. Smallest anion : F⁻
23. Liquid element of radioactive nature : Fr
24. Total number of radioactive elements in periodic table : 25
25. Volatile d-block elements : Zn, Cd, Hg, Uub
26. Element containing no neutron : H
27. Most abundant element on earth : Oxygen
28. Rarest element on earth : At (astatine)
29. Most abundant metal on earth : Al
30. Element having maximum tendency for catenation : Carbon
31. Non metal having highest m. pt., b. pt. : Carbon (diamond)

32.	Metals showing highest oxidation number	:	Os (+8)
33.	Most electrovalent compound	:	CsF
34.	Most stable carbonate	:	Cs ₂ CO ₃
35.	Strongest alkali	:	CsOH
36.	Strongest basic oxide	:	Cs ₂ O
37.	Best electricity conductor among metals	:	Ag
38.	Best electricity conductor among non metals:	:	graphite
39.	Most poisonous element	:	Pu (Plutonium)
40.	Liquid non metals	:	Br
41.	Element kept in water	:	Phosphorous
42.	Elements kept in kerosene	:	IA group element (except Li)
43.	Elements sublime on heating	:	I ₂
44.	Noble metals	:	Au, Pt. etc.
45.	Amphoteric metal	:	Be, Zn, Al, Sn, Pb
46.	Amphoteric non metal	:	Si
47.	Metalloids elements	:	Ge, Se, As, Te, Sb
48.	Non metals having metallic lusture	:	Graphite, Iodine
49.	Heaviest naturally occurring element	:	Uranium
50.	Poorest conductor of electricity	:	Diamond
51.	Hardest naturally occurring element	:	Diamond
52.	Lightest solid metal	:	Li
53.	Amphoteric oxides	:	BeO, Al ₂ O ₃ , ZnO, PbO, PbO ₂ , SnO, SnO ₂ , Sb ₂ O ₃ , As ₂ O ₃ etc.
54.	Neutral oxides of non metals	:	NO, CO, H ₂ O, N ₂ O
55.	Dry bleacher	:	H ₂ O ₂
56.	Dry ice	:	Solid CO ₂
57.	First man made element	:	Tc ₄₃ (Technicium)
58.	Smallest period	:	Ist (2 elements)
59.	Largest period in periodic table	:	6th (32 elements)
60.	Largest group in periodic table	:	IIIB (32 elements)
61.	Most abundant d-block metal	:	Fe
62.	Most abundant s-block metal	:	Ca
63.	Highest density (Metals)	:	Os, Ir
64.	Highest density (Non Metals)	:	Boron
65.	Most abundant gas in atmosphere	:	Nitrogen
66.	Most abundant element in the universe	:	Hydrogen

GENERAL CHEMISTRY & PERIODIC PROPERTIES

- Q.1 Element with electronic configuration as $[\text{Ar}]^{18} 3d^5 4s^1$ is placed in :
(1) IA, s-block (2) VIA, s-block
(3) VIB, s-block (4) VIB, d-block
- Q.2 The atomic numbers of the metallic and non-metallic elements which are liquid at room temperature respectively are :
(1) 55, 87 (2) 33, 87 (3) 35, 80 (4) 80, 35
- Q.3 Which of the following pairs of elements belongs to representative group of elements in the periodic table?
(1) Aluminium and Magnesium (2) Chromium and Zinc
(3) Argentum and Astatine (4) Lanthanum and Thorium
- Q.4 If Aufbau rule is not followed, K – 19 will be placed in _____ block
(1) s (2) p (3) d (4) f
- Q.5 Consider the isoelectronic series :
K, S^{2-} , Cl^- and Ca^{2+} , the radii of the ions decrease as –
(1) $\text{Ca}^{2+} > \text{K}^+ > \text{Cl}^- > \text{S}^{2-}$ (2) $\text{Cl}^- > \text{S}^{2-} > \text{K}^+ > \text{Ca}^{2+}$
(3) $\text{S}^{2-} > \text{Cl}^- > \text{K}^+ > \text{Ca}^{2+}$ (4) $\text{K}^+ > \text{Ca}^{2+} > \text{S}^{2-} > \text{Cl}^-$
- Q.6 Justification of putting H in VIIA group is -
(1) H is gas (2) H is non metal
(3) It form NaH like salt (4) It has ortho and para allotropes
- Q.7 The second ionization energies of elements are always higher than their first ionization energies because:
(1) the cation is smaller than its parent atom.
(2) it is easier to remove electron from cation.
(3) ionization is an endothermic process.
(4) cation formed always have stable half filled or completely filled valence shell electron configuration.
- Q.8 The discovery of which of the following group of elements gave a death blow to the Newlands Law -
(1) Inert gases (2) Alkali metals
(3) Transuranic element (4) Halogens
- Q.9 Electron affinity is a :
(1) Relative strength to attract the shared electron pair
(2) Necessary energy required to remove the electron from the ultimate orbit
(3) Energy released when an electron is added to the outermost shell
(4) Energy released when an electron is added to the inner shell

- Q.10 The name 'Rare earths' is used for -
 (1) Lanthanides only (2) Actinides only
 (3) Both lanthanides and actinides (4) Alkaline earth metals
- Q.11 Z/e ratio for N^{3-} , O^{2-} and F^{-} respectively will be -
 (1) 0.7, 0.8 and 0.9 (2) 0.9, 0.8 and 0.7
 (3) 7, 8 and 9 (4) 9, 8 and 7
- Q.12 The total number of neutrons in dipositive zinc ions with mass number 70 is
 (1) 34 (2) 40 (3) 36 (4) 38
- Q.13 As applied to periodic table, which of the following sets include only magic numbers -
 (1) 2, 8, 20, 28, 50, 82, 126 (2) 2, 8, 8, 18, 18, 32
 (3) 2, 2, 8, 8, 18, 32 (4) 2, 8, 18, 18, 32, 32
- Q.14 Which is a true statement ?
 (1) Larger is the value of ionisation energy easier is the formation of cation.
 (2) Larger is the value of electron affinity easier is the formation of anion.
 (3) Larger is the value of ionisation energy as well as electron affinity the smaller is the electronegativity of atom.
 (4) Larger is the Z_{eff} larger is the size of atom.
- Q.15 Which of the following sets of quantum numbers represent an impossible arrangement
- | | n | l | m | m_s | | n | l | m | m_s |
|-----|---|---|----|---------------|-----|---|---|---|---------------|
| (1) | 3 | 2 | -2 | $\frac{1}{2}$ | (2) | 4 | 0 | 0 | $\frac{1}{2}$ |
| (3) | 3 | 2 | -3 | $\frac{1}{2}$ | (4) | 5 | 3 | 0 | $\frac{1}{2}$ |
- Q.16 An element X occurs in short period having configuration ns^2np^1 . The formula and nature of its oxide is :
 (1) XO_3 , basic (2) XO_3 , acidic (3) X_2O_3 , amphoteric (4) X_2O_3 , basic
- Q.17 The quantum numbers of four electrons (e1 to e4) are given below
- | | n | l | m | s | | n | l | m | s |
|----|---|---|---|------|----|---|---|----|-----|
| e1 | 3 | 0 | 0 | +1/2 | e2 | 4 | 0 | 0 | 1/2 |
| e3 | 3 | 2 | 2 | -1/2 | e4 | 3 | 1 | -1 | 1/2 |
- The correct order of decreasing energy of these electrons is:
 (1) $e4 > e3 > e2 > e1$ (2) $e2 > e3 > e4 > e1$
 (3) $e3 > e2 > e4 > e1$ (4) none

- Q.18 If the nitrogen atom had electronic configuration $1s^7$, it would have energy lower than that of normal ground state configuration $1s^2 2s^2 2p^3$, because the electrons would be closer to the nucleus. Yet $1s^7$ is not observed because it violates :-
- (1) Heisenberg uncertainty principle (2) Hund's rule
(3) Pauli's exclusion principle (4) Bohr postulate of stationary orbits
- Q.19 The second ionisation potentials in electron volts of oxygen and fluorine atoms are respectively given by-
- (1) 35.1, 38.3 (2) 38.3, 38.3 (3) 38.3, 35.1 (4) 35.1, 35.1
- Q.20 Which of the following sequences is correct for decreasing order of ionic radius -
- (1) $Se^{2-} > I^- > Br^- > O^{2-} > F^-$ (2) $I^- > Se^{2-} > O^{2-} > Br^- > F^-$
(3) $Se^{2-} > I^- > Br^- > F^- > O^{2-}$ (4) $I^- > Se^{2-} > Br^- > O^{2-} > F^-$
- Q.21 The ionization energy of sodium is 495 kJ mol^{-1} . How much energy is needed to convert atoms present in 2.3 mg of sodium into sodium ions -
- (1) 4.95 J (2) 49.5 J (3) 495 J (4) 0.495 J
- Q.22 Which of the following is arranged in decreasing order of size ?
- (1) $Mg^{2+} > Al^{3+} > O^{2-}$ (2) $O^{2-} > Mg^{2+} > Al^{3+}$
(3) $Al^{3+} > Mg^{2+} > O^{2-}$ (4) $Mg^{2+} = Al^{3+} > O^{2-}$
- Q.23 Fluorine has the highest electronegativity among the $ns^2 np^5$ group on the Pauling scale, but the electron affinity of fluorine is less than that of chlorine because :
- (1) the atomic number of fluorine is less than that of chlorine.
(2) fluorine being the first member of the family behaves in an unusual manner.
(3) chlorine can accommodate an electron better than fluorine by utilising its vacant 3d-orbital.
(4) small size, high electron density and an increased electron repulsion makes addition of an electron to fluorine less favourable than that in the case of chlorine.
- Q.24 The first (IE_1) and second (IE_2) ionization energies (kJ/mol) of a few elements designated by Roman numerals are given below. Which of these would be an alkali metal ?
- | | | IE_1 | IE_2 | | IE_1 | IE_2 | |
|-----|-----|--------|--------|-----|--------|--------|------|
| (1) | I | 2372 | 5251 | (2) | II | 520 | 7300 |
| (3) | III | 900 | 1760 | (4) | IV | 1680 | 3380 |
- Q.25 On the basis of valencies of elements in a group, the formula of compound formed by tin with fluorine is?
- (1) SnF (2) SnF_3 (3) SnF_6 (4) SnF_4
- Q.26 Which of the following atoms possesses the smallest volume ?
- (1) S (2) Si (3) P (4) He
- Q.27 The correct values of ionization enthalpies (in kJ mol^{-1}) of Si, P, Cl and S respectively are -
- (1) 786, 1012, 999, 1256 (2) 1012, 786, 999, 1256
(3) 786, 1012, 1256, 999 (4) 786, 999, 1012, 1256

- Q.28 The IE values of $\text{Al}_{(g)} = \text{Al}^+ + e$ is $577.5 \text{ kJ mol}^{-1}$ and ΔH for $\text{Al}_{(g)} = \text{Al}^{3+} + 3e$ is 5140 kJ mol^{-1} . If second and third IE values are in the ratio 2 : 3. Calculate IE_2 and IE_3 .
- (1) $\text{IE}_2 = 1825 \text{ kJ/mole}$, $\text{IE}_3 = 2737.5 \text{ kJ/mol}$
 (2) $\text{IE}_2 = 1600 \text{ kJ/mole}$, $\text{IE}_3 = 1737.5 \text{ kJ/mol}$
 (3) $\text{IE}_2 = 1925 \text{ kJ/mole}$, $\text{IE}_3 = 2037.5 \text{ kJ/mol}$
 (4) $\text{IE}_2 = 1252 \text{ kJ/mole}$, $\text{IE}_3 = 1237.5 \text{ kJ/mol}$
- Q.29 Consider the $\text{M}(\text{OH})_3$ formed by all the group 13 elements. The correct sequence of acidic strength of hydroxides $[\text{M}(\text{OH})_3]$ is -
- (1) $\text{B}(\text{OH})_3 < \text{Al}(\text{OH})_3 > \text{Ga}(\text{OH})_3 > \text{In}(\text{OH})_3 > \text{Tl}(\text{OH})_3$
 (2) $\text{B}(\text{OH})_3 > \text{Tl}(\text{OH})_3 > \text{Al}(\text{OH})_3 > \text{In}(\text{OH})_3 > \text{Ga}(\text{OH})_3$
 (3) $\text{Al}(\text{OH})_3 > \text{Ga}(\text{OH})_3 > \text{B}(\text{OH})_3 > \text{In}(\text{OH})_3 > \text{Tl}(\text{OH})_3$
 (4) $\text{B}(\text{OH})_3 > \text{Al}(\text{OH})_3 > \text{Ga}(\text{OH})_3 > \text{In}(\text{OH})_3 > \text{Tl}(\text{OH})_3$
- Q.30 Calculate the bond length of C–X bond if C–C bond length is 1.54 \AA and X–X bond length is 1.2 \AA and electronegativities of C and X are 2.0 and 3.0 respectively.
- (1) 2.74 \AA (2) 1.37 \AA
 (3) 1.46 \AA (4) 1.28 \AA
- Q.31 For an element 'A'.
- $$\text{A} \xrightarrow{\text{IE}_1} \text{A}^+ \xrightarrow{\text{IE}_2} \text{A}^{2+} \xrightarrow{\text{IE}_3} \text{A}^{3+} \longrightarrow \dots\dots\dots$$
- The IE_1 and IE_3 values are 27 kJ/mole and 51 kJ/mole respectively. Then the value of IE_2 is _____ kJ/mole .
- (1) 21 (2) 33 (3) 59 (4) 63
- Q.32 Which of the following statements is incorrect.
- (1) Boron is diagonally related to magnesium.
 (2) Bi^{5+} ion has smaller radius compared to Bi^{3+} .
 (3) last number of the seventh period element of periodic table will have atomic number of 118 if discovered.
 (4) Al_2O_3 is an amphoteric oxide.
- Q.33 Fluorine has low electron affinity than chlorine because of -
- (1) Smaller radius of fluorine, high electron density
 (2) Smaller radius of chlorine, high electron density
 (3) Bigger radius of fluorine, less electron density
 (4) Smaller radius of chlorine, less electron density
- Q.34 For the processes $\text{K}^+(\text{g}) \xrightarrow{\text{I}} \text{K}(\text{g}) \xrightarrow{\text{II}} \text{K}(\text{s})$
- (1) Energy is released in (I) and absorbed in (II)
 (2) Energy is absorbed in (I) and released in (II)
 (3) Energy is absorbed in both the processes
 (4) Energy is released in both the processes

Q.35 Of the following sets which one does NOT contain isoelectronic species ?

- (1) CN^- , N_2 , C_2^{2-} (2) PO_4^{3-} , SO_4^{2-} , ClO_4^-
 (3) BO_3^{3-} , CO_3^{2-} , NO_3^- (4) SO_3^{2-} , CO_3^{2-} , NO_3^-

Q.36 Match list-I with list-II and select the correct answer using the codes given below -

List-I	List-II
Ion	Radius (in pm)
(I) Li^+	(a) 216
(II) Na^+	(b) 195
(III) Br^-	(c) 60
(IV) I^-	(d) 95

Codes :

	I	II	III	IV		I	II	III	IV
(1)	a	b	d	c	(2)	b	c	a	d
(3)	c	d	b	a	(4)	d	c	b	a

Q.37 The incorrect statement among the following is :

- (1) density increases across the period from left to right while decreases down the group.
 (2) ionization energy depends upon the type of orbital (of same energy level) from which electron is being removed.
 (3) generally electron affinity decreases down the group.
 (4) moving diagonally, the charge to size ratio remains nearly same for 2 & 3rd period elements upto 14th group.

Q.38 Which one of the following is incorrect ?

- (1) An element which has high electronegativity always has high electron gain enthalpy
 (2) Electron gain enthalpy is the property of an isolated atom
 (3) Electronegativity is the property of a bonded atom
 (4) Both electronegativity and electron gain enthalpy are usually directly related to nuclear charge and inversely related to atomic size

Q.39 The first ionization potentials of four consecutive elements present in the second period of periodic table are 8.3, 11.3, 14.5 and 13.6 eV respectively which one of the following is the first ionization potential of nitrogen?

- (1) 13.6 (2) 14.5 (3) 11.3 (4) 8.3

Q.40 Mg forms Mg(II) because of -

- (1) The oxidation state of Mg is +2
 (2) Difference between I.P_1 and I.P_2 is greater than 16.0 eV
 (3) There are only two electrons in the outermost energy level of Mg
 (4) Difference between I.P_1 and I.P_2 is less than 11 eV

- Q.41 IP_1 and IP_2 of Mg are 178 and 348 K.cal mol⁻¹. The enthalpy required for the reaction $Mg \rightarrow Mg^{2+} + 2e^-$ is -
 (1) + 170 K.cal (2) + 526 K.cal (3) - 170 K.cal (4) - 526 K.cal
- Q.42 Which of the following is affected by stable configuration of an atom :
 (i) Electronegativity (ii) Ionisation potential (iii) Electron affinity
 Correct answer is -
 (1) Only (i)
 (2) Only (ii)
 (3) (ii) & (iii)
 (4) All above properties are affected by stable configuration
- Q.43 Increasing order of Electron affinity for following configuration.
 (a) $1s^2, 2s^2 2p^3$ (b) $1s^2, 2s^2 2p^4$
 (c) $1s^2, 2s^2 2p^6 3s^2 3p^4$ (d) $1s^2, 2s^2 2p^6, 3s^2 3p^3$
 (1) $a < d < b < c$ (2) $d < a < c < b$ (3) $a < b < c < d$ (4) $a < b < d < c$
- Q.44 $O_{(g)} + 2e^- \rightarrow O_{(g)}^{2-}$ $\Delta H_{eg} = 744.7$ KJ/mole. The positive value of ΔH_{eg} is due to -
 (1) Energy is released to add to $1 e^-$ to O^{-1} (2) Energy is required to add to $1 e^-$ to O^{-1}
 (3) Energy is needed to add on $1 e^-$ to O (4) None of the above is correct
- Q.45 The correct order of electron affinity is -
 (1) $Be < B < C < N$ (2) $Be < N < B < C$ (3) $N < Be < C < B$ (4) $N < C < B < Be$
- Q.46 Which is not anomalous pair of elements in the Medeleevs periodic table:-
 (1) Ar and K (2) Co and Ni (3) Te and I (4) Al and Si
- Q.47 The nomenclature of ICl is iodine chloride because
 (1) Size of I < Size of Cl
 (2) Atomic number of I > Atomic number of Cl
 (3) E.N. of I < E.N. of Cl
 (4) E. A. of I < E. A. of Cl
- Q.48 Which of the following statement is false :-
 (1) Elements of $ns^2 np^6$ electronic configuration lies in 1st to 6th period
 (2) Typical elements lies in 3rd period
 (3) The seventh period will accommodate thirty two elements
 (4) Boron and silicon are diagonally related
- Q.49 The screening effect of d- electrons is :-
 (1) Equal to the p - electrons (2) Much more than p - electrons
 (3) Same as f - electrons (4) Less than p - electrons

Q.50 Fe^{+3} is more stable than Fe^{+2} the reason is :-

- (1) ΔIP is less than 11 eV
 (2) More stable core in Fe^{+3}
 (3) Inert pair effect
 (4) (1) & (2) both are correct

Q.51 The elements which occupy the peaks of the atomic volume curve are :-

- (1) Fe, Co, Ni (2) Cl, Br, I (3) K, Rb, Cs (4) Ne, Ar, Kr

ASSERTION AND REASON

Directions : Each of these questions contains an Assertion followed by reason. Read them carefully and answer the question on the basis of following options. You have to select the one that best describes the two statements.

- (1) If both assertion and reason are true and reason is the correct explanation of assertion.
 (2) If both assertion and reason are true but reason is not the correct explanation of assertion.
 (3) If Assertion is true but reason is false.
 (4) If both assertion and reason are false.

Q.52 **Assertion :** Nitrogen (atomic number 7) has less electron affinity than the oxygen (atomic number 8).
Reason : The magnitude of an element's electron affinity only depends on the element's valence shell electrons configuration.

Q.53 **Assertion :** The atomic radii of the elements of the oxygen family are smaller than the atomic radii of the corresponding elements of the nitrogen family.
Reason : The members of the oxygen family are more electronegative and thus have lower values of nuclear charge than those of the nitrogen family.

Q.54 **Assertion :** Properties of Beryllium is similar to that of aluminium
Reason : Both the elements belongs to same group

Q.55 **Assertion :** Chlorine is most electronegative element.
Reason : Chlorine has tendency to loose electrons.

Q.56 **Assertion :** Atomic radius of inert gases is largest in the period
Reason : Effective nuclear charge of inert gases is minimum

Q.57 **Assertion :** Na^+ and Cl^- have similar ionic radius.
Reason : Z_{eff} in Na^+ and Cl^- is same.

Q.58 **Assertion :** Atomic size along a period decreases.
Reason : Z_{eff} in a period decreases.

Q.59 **Assertion :** The 1st IP of Be is greater than that of B.
Reason : 2p orbital is lower in energy than 2s.

ANSWER KEY

Q.1	4	Q.2	4	Q.3	1	Q.4	3	Q.5	3	Q.6	3	Q.7	1
Q.8	1	Q.9	3	Q.10	1	Q.11	1	Q.12	2	Q.13	2	Q.14	2
Q.15	3	Q.16	3	Q.17	3	Q.18	3	Q.19	3	Q.20	4	Q.21	2
Q.22	2	Q.23	4	Q.24	2	Q.25	4	Q.26	4	Q.27	3	Q.28	1
Q.29	4	Q.30	4	Q.31	2	Q.32	1	Q.33	1	Q.34	4	Q.35	4
Q.36	3	Q.37	1	Q.38	1	Q.39	2	Q.40	4	Q.41	2	Q.42	3
Q.43	1	Q.44	2	Q.45	2	Q.46	4	Q.47	3	Q.48	1	Q.49	4
Q.50	4	Q.51	3	Q.52	3	Q.53	3	Q.54	3	Q.55	4	Q.56	3
Q.57	4	Q.58	3	Q.59	3								

SMART ACHIEVERS
smartachievers.online