

# Chemistry Class 9

## Periodic Table and Periodicity of Properties



Important Multiple Choice Questions (mcq's)

**Periodic Table of the Elements**

1	2											13	14	15	16	17	18	
1 H Hydrogen 1.008																	2 He Helium 4.003	
2	3	4											5	6	7	8	9	10
	Li Lithium 6.941	Be Beryllium 9.012											B Boron 10.81	C Carbon 12.01	N Nitrogen 14.01	O Oxygen 16.00	F Fluorine 18.00	Ne Neon 20.18
3	11	12											13	14	15	16	17	18
	Na Sodium 22.99	Mg Magnesium 24.31											Al Aluminum 26.98	Si Silicon 28.09	P Phosphorus 30.97	S Sulfur 32.07	Cl Chlorine 35.45	Ar Argon 39.95
4	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	K Potassium 39.10	Ca Calcium 40.08	Sc Scandium 44.96	Ti Titanium 47.88	V Vanadium 50.94	Cr Chromium 52.00	Mn Manganese 54.94	Fe Iron 55.85	Co Cobalt 58.93	Ni Nickel 58.69	Cu Copper 63.55	Zn Zinc 65.39	Ga Gallium 69.72	Ge Germanium 72.61	As Arsenic 74.92	Se Selenium 78.96	Br Bromine 79.90	Kr Krypton 83.80
5	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
	Rb Rubidium 85.47	Sr Strontium 87.62	Y Yttrium 88.91	Zr Zirconium 91.22	Nb Niobium 92.91	Mo Molybdenum 95.94	Tc Technetium 98	Ru Ruthenium 101.1	Rh Rhodium 102.9	Pd Palladium 106.4	Ag Silver 107.9	Cd Cadmium 112.4	In Indium 114.8	Sn Tin 118.7	Sb Antimony 121.8	Te Tellurium 127.6	I Iodine 126.9	Xe Xenon 131.3
6	55	56	*	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
	Cs Cesium 132.9	Ba Barium 137.3		Hf Hafnium 178.5	Ta Tantalum 180.9	W Tungsten 183.8	Re Rhenium 186.2	Os Osmium 190.2	Ir Iridium 192.2	Pt Platinum 195.1	Au Gold 197.0	Hg Mercury 200.6	Tl Thallium 204.4	Pb Lead 207.2	Bi Bismuth 209.0	Po Polonium 209	At Astatine 210	Rn Radon 222
7	87	88	**	104	105	106	107	108	109	110	111	112						
	Fr Francium 223	Ra Radium 226		Rf Rutherfordium 261	Db Dubnium 262	Sg Seaborgium 266	Bh Bohrium 264	Hs Hassium 277	Mt Meitnerium 268	Ds Darmstadtium 281	Rg Roentgenium 272	Cn Copernicium 285						

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1) Total number of periods in the periodic table are \_\_\_\_.

**A) 7**

B) 8

C) 11

D) 10

**Answer: A (7)**

2) An element whose last electron enters into s-subshell is a \_\_\_\_ block element.

A) p

B) d

**C) s**

D) f

**Answer: C (s)**

3) Which one of the following group contains halogens?

A) I A

B) II A

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C) VII A

D) VII B

**Answer: C (VII A)**

4) Group II A elements are also called \_\_\_\_.

A) Alkali metal

**B) Alkaline earth metals**

C) Carbon family

D) Halogens

**Answer: B (Alkaline earth metals)**

5) An element of 2<sup>nd</sup> period has \_\_\_ number of shells.

A) 6

B) 4

C) 3

**D) 2**

**Answer: D (2)**

6) Valence shell electronic configuration of Oxygen is  $2s^2, 2p^4$ , it is a member of group \_\_\_\_

A) II A

**B) VI A**

C) III A

D) VIII A

**Answer : B ( VI A)**

7) Main group elements are arranged into \_\_\_\_ groups.

A) 3

B) 6

C) 5

**D) 8**

**Answer: D (8)**

8) Period number of  $S^{16}_{32}$  is \_\_\_\_

**A) 3**

B) 4

C) 5

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D) 6

**Answer: A (3)**

9) Which of the following element belongs to Group VII A?

A) O

B) N

C) C

**D) F**

**Answer: D (F)**

10) Group VIII A elements are called \_\_\_\_.

A) Halogens

B) Alkaline earth metals

C) Oxygen family

**D) Noble gases**

**Answer: D (Noble gases)**

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11) s and p block elements are also called \_\_\_\_ elements.

A) Transition metals

B) Inert

**C) Representative**

D) None of them

**Answer: C (Representative)**

12) Elements of the same group have same \_\_\_\_ properties.

**A) Chemical**

B) Physical

C) Both chemical and physical

D) None of them

**Answer: A (Chemical)**

13) Hydrogen is a member of \_\_\_\_ period .

A) 2

B) 4

C) 6

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**D) 1**

**Answer: D (1)**

14) Elements of the same \_\_\_\_ has same number of valence shell electrons.

A) Period

**B) Group**

C) House

D) None of them

**Answer: B ( Group )**

15) Boron Family is the name of Group \_\_\_\_.

A) IVA

**B) III A**

C) V A

D) VIA

**Answer: B ( IIIA)**

16) By the end of 18<sup>th</sup> century , \_\_\_ elements were known .

**A) 23**

B) 47

C) 39

D) 68

**Answer: A (23)**

17) Atomic number was discovered by Moseley in \_\_\_\_.

A) 1990

**B) 1913**

C) 1880

D) 2009

**Answer: B (1913)**

18) It was noticed that \_\_\_\_\_ could serve as a base for systematic arrangement of elements.

A) Atomic mass

B) Neutron number

**C) Atomic number**

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D) none of them

**Answer: C ( Atomic number )**

19) The horizontal rows of the periodic table are called \_\_\_\_\_.

A) Groups

B) Table

C) Bond

**D) Periods**

**Answer: D (Periods)**

20) Number of elements in fifth period are \_\_\_\_\_

A) 2

B) 8

**C) 18**

D) 32

**Answer: C (18)**

21) Group B elements are called \_\_\_\_ elements.

A) Normal

**B) Transition**

C) Main group

D) None of them

**Answer: B (Transition)**

22) Mg is present in which group?

A) I A

**B) II A**

C) III A

D) IV A

**Answer: B (II A)**

23) An element has 5 valence shell electrons , it is a member of which group ?

A) II A

B) III A

C) IV A

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**D) V A**

**Answer: D ( VA)**

**24) Al <sup>13</sup> is a member of which period ?**

A) 1<sup>ST</sup>

B) 2<sup>ND</sup>

**C) 3<sup>RD</sup>**

D) 4<sup>TH</sup>

**Answer: C (3<sup>rd</sup> )**

**25) \_\_\_\_ properties depends on the sizes of the atoms.**

A) Chemical

**B) Physical**

C) Neurological

D) None of them

**Answer: B (Physical)**

26) Which one of the following has greater shielding effect?

A) Li

B) Na

**C) K**

D) H

**Answer: C (K)**

27) As we move from top to bottom in a group shielding effect \_\_\_\_.

A) Stays constant

B) Decreases

C) Both a and b

**D) Increases**

**Answer: D (Increases)**

28) As we move from left to right in a period the number shells in elements \_\_\_\_.

**A) stays constant**

B) Increases

C) Decreases

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D) None of them

**Answer: A ( stays constant)**

**29) Shielding effect of Sn is greater than which of the following?**

A) Cs

**B) C**

C) Rn

D) Po

**Answer: B (C)**

**30) Which one of the following pair of elements have same number of valence shell electrons?**

A) Li, B

B) K, Ne

**C) O, S**

D) None of them

**Answer: C (O,S)**

31) The size of an atom depends upon its

**A) Electronic configuration**

B) Chemical properties

C) Periodic table

D) None of them

**Answer: A (Electronic configuration)**

32) Which one of the following has the smallest atomic size?

A) K

B) Al

**C) H**

D) Po

**Answer: C (H)**

33) The atomic radius \_\_\_ in any given period as you move across the period.

**A) Decreases**

B) Increases

C) remains same

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D) None of them

**Answer: A (Decreases)**

**34) The atomic radius \_\_\_ in any given group as you move from top to bottom.**

A) Decreases

**B) Increases**

C) remains same

D) None of them

**Answer: B (Increases)**

**35) Which one of the following has the largest atomic size?**

A) Ne

B) Xe

C) Sn

**D) Fr**

**Answer: D (Fr)**

36) Which one of the following has the highest ionization energy?

A) Li

B) Be

C) B

**D) C**

**Answer: C ( C )**

37) Which one of the following has higher ionization energy as compared to Ne?

A) F

**B) He**

C) H

D) Li

**Answer: B (He)**

38) Ionization energy \_\_\_ as we move from left to right in a period.

**A) Increases**

B) Decreases

C) Remains same

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D) None of them

**Answer: A (Increases)**

**39) Ionization energy is a measure of the extent to which the nucleus \_\_\_\_\_ the outermost electron.**

A) Repels

B) Compress

**C) Attracts**

D) None of them

**Answer: C (Attracts)**

**40) Greater shielding effects results in a \_\_\_\_\_ attraction of the nucleus for the valence electrons.**

A) Greater

B) Higher

C) Constant

**D) Weaker**

**Answer: D (Weaker)**

41) Electron affinity explains the \_\_\_\_ formation.

**A) Anion**

B) Cation

C) Molecule

D) None of them

**Answer: A (Anion)**

42) As you move from left to right across a period, the electron affinity generally \_\_\_\_.

A) Decreases

**B) Increases**

C) Remains same

D) None of them

**Answer: B (Increases)**

43) Due to increase in \_\_\_\_\_ added electron binds less tightly to the nucleus.

A) Electronegativity

**B) Shielding effect**

C) Ionization energy

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D) None of them

**Answer: B (Shielding effect)**

44) Electronegativity is the ability of an atom to attract the \_\_\_\_\_ towards itself in a chemical bond.

A) Proton

B) Neutron

**C) Electron**

D) All of them

**Answer: C (Electron)**

45) Which of the following has the highest electronegativity?

**A) F**

B) O

C) S

D) H

**Answer: A (F)**

46) Which one of the following has the same electronegativity as Nitrogen?

A) F

B) S

**C) Cl**

D) H

**Answer: C (Cl)**

47) Electron affinity is the amount of energy \_\_\_\_\_ when an electron is added in the valence shell of an isolated atom to form uninegative gaseous ion.

A) Absorbed

B) Released

C) Emitted

**D) Both b and c**

**Answer: D (Both b and c)**

48) Xe belongs to which group?

A) III A

B) IV A

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C) V A

**D) VIII A**

**Answer: D ( VIII A )**

49) Which of the following has the largest atomic size?

**A) Rb**

B) Sr

C) In

D) Sn

**Answer: A (Rb)**

50) Which one of the following has the highest ionization energy?

A) H

B) Ne

C) Ar

**D) He**

**Answer: D (He)**