

## Arjuna NEET 2026

## Inorganic Chemistry

## Classification of Elements and Periodicity in Properties

DPP: 1

- Q1** In the modern periodic table, the period indicates the value of  
(A) Atomic number  
(B) Atomic mass  
(C) Principal quantum number  
(D) Azimuthal quantum number
- Q2** The arrangement of elements in the Modern Periodic Table is based on their  
(A) Increasing atomic mass in the period  
(B) Increasing atomic number in the horizontal rows  
(C) Increasing atomic number in the vertical columns  
(D) Increasing atomic mass in the group
- Q3** How many groups and periods are there in the Modern Periodic Table?  
(A) 18 groups 8 periods  
(B) 17 groups 8 periods  
(C) 18 groups 7 periods  
(D) 17 groups 7 periods
- Q4** How many elements are present in 6<sup>th</sup> period ?  
(A) 18  
(B) 32  
(C) 18  
(D) 64
- Q5** With which block  $_{30}\text{Zn}$  belongs?  
(A) s  
(B) p  
(C) d  
(D) f
- Q6** What is the other name for group 18th elements?  
(A) Noble gases  
(B) Alkali metals  
(C) Alkaline earth metals  
(D) Halogens
- Q7** If the atomic number of an element is 33, it will be placed in the periodic table in the  
(A) 1st group  
(B) 3rd group  
(C) 15th group  
(D) 17th group
- Q8** An element whose IUPAC name is Ununtrium (Uut) belong to:  
(A) s-Block element  
(B) p-Block element  
(C) d-Block element  
(D) Inner transition element
- Q9** Which of the following pairs has both members from the same group of the periodic table  
(A) Mg, Ba  
(B) Mg, Na  
(C) Mg, Cu  
(D) Mg, Cl
- Q10** The element with atomic number  $Z = 118$  will be  
(A) Noble gas  
(B) Transition metal  
(C) Alkali metal  
(D) Alkaline earth metal



## Answer Key

Q1 (C)

Q2 (B)

Q3 (C)

Q4 (C)

Q5 (C)

Q6 (A)

Q7 (C)

Q8 (B)

Q9 (A)

Q10 (A)



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# Arjuna NEET (2026)

## Inorganic Chemistry

DPP: 2

### Classification of Elements and Periodicity in Properties

- Q1** Elements whose outer electronic configuration vary from  $ns^2np^1$  to  $ns^2np^6$  constitute  
 (A) s-Block of elements  
 (B) p-Block of elements  
 (C) d-Block of elements  
 (D) f-Block of elements
- Q2** The period number and group number of "Tantalum" ( $Z = 73$ ) are respectively:  
 (A) 5,7  
 (B) 6,13  
 (C) 6,5  
 (D) None of the above.
- Q3** The atomic numbers of elements of the second inner transition elements lie in the range of  
 (A) 88 to 101 (B) 89 to 102  
 (C) 90 to 103 (D) 91 to 104
- Q4** Which of the following elements belong to alkali metals ?  
 (A)  $1s^2, 2s^2 2p^2$   
 (B)  $1s^2, 2s^2 2p^6, 3s^2 3p^6 3d^{10}, 4s^2 4p^6, 5s^1$   
 (C)  $1s^2, 2s^2 2p^5$   
 (D)  $1s^2, 2s^2 2p^6, 3s^2 3p^1$
- Q5** The element with atomic number  $Z = 115$  will be placed in  
 (A) 7th period, 1 group  
 (B) 8th period, 14 group  
 (C) 7th period, 15 group  
 (D) 6th period, 5 group
- Q6** Which of the following sets of atomic numbers corresponds to elements of group 16 ?  
 (A) 8, 16, 32, 54  
 (B) 16, 34, 54, 86  
 (C) 8, 16, 34, 52  
 (D) 10, 16, 32, 50
- Q7** What is the name of element with atomic number 105  
 (A) Kurchatovium (B) Dubnium  
 (C) Nobelium (D) Holmium
- Q8** Which of the following elements do not belong to the family indicated  
 (A) Cu - Coinage metal  
 (B) Ba - Alkaline earth metal  
 (C) Zn - Alkaline earth metal  
 (D) Xe - Noble gas
- Q9** Uub is the symbol for the element with atomic number  
 (A) 102 (B) 108  
 (C) 110 (D) 112
- Q10** An element with atomic number 117 is known as  
 (A) Nihonium (B) Flerovium  
 (C) Tennessine (D) Roentgenium
- Q11** Meitnerium is IUPAC official name of an element with atomic number  
 (A) 113 (B) 118  
 (C) 104 (D) 109



## Answer Key

Q1 (B)

Q2 (C)

Q3 (C)

Q4 (B)

Q5 (C)

Q6 (C)

Q7 (B)

Q8 (C)

Q9 (D)

Q10 (C)

Q11 (D)



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# Arjuna NEET (2026)

## Inorganic Chemistry

DPP: 3

### Classification of Elements and Periodicity in Properties

- Q1** Total number of electrons contained in all the p-orbitals of bromine is:  
 (A) 5 (B) 17  
 (C) 19 (D) 23
- Q2** Which of the following is not correct for lanthanoids and actinoids ?  
 (A) both have same period  
 (B) both have same group  
 (C) both have same block  
 (D) none of these
- Q3** In the fourth period of the periodic table, how many elements have one or more 4 d electrons ?  
 (A) 2 (B) 18  
 (C) 0 (D) 6
- Q4** Electronic configuration of an element X is  $[\text{Xe}] 6s^2 4f^{14} 5d^{10} 6p^3$  it is:  
 (A) Boron  
 (B) Ti  
 (C) Po  
 (D) Bi
- Q5** Beryllium shows a diagonal relationship with  
 (A) Mg (B) Na  
 (C) B (D) Al
- Q6** Which ion is not isoelectronic with  $\text{O}^{2-}$  ?  
 (A)  $\text{N}^{3-}$   
 (B)  $\text{Na}^+$   
 (C)  $\text{F}^-$   
 (D)  $\text{Ti}^+$
- Q7** The outer electronic structure of Lawrencium (atomic number 103) is  
 (A)  $[\text{Rn}] 5f^{13} 7s^2 7p^2$   
 (B)  $[\text{Rn}] 5f^{13} 6d^1 7s^1 7p^2$   
 (C)  $[\text{Rn}] 5f^{14} 7s^1 7p^2$   
 (D)  $[\text{Rn}] 5f^{14} 7s^2 7p^1$
- Q8** Consider the following electronic configuration of an element (P):  
 $[\text{Xe}] 4f^{14} 5d^1 6s^2$   
 Then correct statement about element P is:  
 (A) It belongs to 6th period and the 1st group.  
 (B) It belongs to 6th period and the 2nd group.  
 (C) It belongs to 6th period and the 3rd group.  
 (D) None of the above.
- Q9** The electronic configuration of d-block elements is exhibited by  
 (A)  $ns^{1-2}(n-1)d^{1-10}$   
 (B)  $ns^2(n-1)d^{10}$   
 (C)  $(n-1)d^{10}s^2$   
 (D)  $ns^2np^5$
- Q10** Which of the following elements belong to alkali metals ?  
 (A)  $1s^2, 2s^2 2p^2$   
 (B)  $1s^2, 2s^2 2p^6, 3s^2 3p^6 3d^{10}, 4s^2 4p^6, 5s^1$   
 (C)  $1s^2, 2s^2 2p^5$   
 (D)  $1s^2, 2s^2 2p^6, 3s^2 3p^1$



## Answer Key

Q1 (B)

Q2 (A)

Q3 (C)

Q4 (D)

Q5 (D)

Q6 (D)

Q7 (D)

Q8 (C)

Q9 (A)

Q10 (B)



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## Arjuna NEET 2026

## Inorganic Chemistry

DPP: 4

## Classification of Elements and Periodicity in Properties

- Q1** Which of the following is not isoelectronic species?  
 (A)  $\text{Cl}^-$ ,  $\text{P}^{3-}$ , Ar  
 (B)  $\text{N}^{3-}$ , Ne,  $\text{Mg}^{+2}$   
 (C)  $\text{B}^{+3}$ , He,  $\text{Li}^+$   
 (D)  $\text{N}^{3-}$ ,  $\text{S}^{2-}$ ,  $\text{Cl}^-$
- Q2** Ionic radii is  
 (A) Inversely proportional to effective nuclear charge  
 (B) Inversely proportional to square of effective nuclear charge  
 (C) Directly proportional to effective nuclear charge  
 (D) Directly proportional to square of effective nuclear charge
- Q3** Which of the following has largest radius?  
 (A)  $1s^2, 2s^2 2p^6 3s^2$   
 (B)  $1s^2, 2s^2 2p^6, 3s^2 3p^1$   
 (C)  $1s^2, 2s^2 2p^6 3s^2 3p^3$   
 (D)  $1s^2 2s^2 2p^6 3s^2 3p^5$
- Q4** The correct order according to size is  
 (A)  $\text{O} > \text{O}^- > \text{O}^{2-}$   
 (B)  $\text{O}^- > \text{O}^{2-} > \text{O}$   
 (C)  $\text{O}^{2-} > \text{O}^- > \text{O}$   
 (D)  $\text{O} > \text{O}^{2-} > \text{O}^-$
- Q5** In a given shell the order of screening effect is  
 (A)  $s > p > d > f$   
 (B)  $s > p > f > d$   
 (C)  $f > d > p > s$   
 (D)  $s < p < d < f$
- Q6** Elements belonging to the same group of periodic table have  
 (A) Same number of energy levels  
 (B) Same number of valence electrons  
 (C) Same number of electrons  
 (D) Same ionisation enthalpy.
- Q7** In comparison to the parent atom, the size of the  
 (A) Cation is smaller but anion is larger  
 (B) Cation is larger but anion is smaller  
 (C) Cation and anion are equal in size  
 (D) All the three are correct depending upon the atom
- Q8** Which one is the correct order of the size of the iodine species.  
 (A)  $\text{I} > \text{I}^+ > \text{I}^-$   
 (B)  $\text{I} > \text{I}^- > \text{I}^+$   
 (C)  $\text{I}^+ > \text{I}^- > \text{I}$   
 (D)  $\text{I}^- > \text{I} > \text{I}^+$
- Q9** When a chlorine atom becomes chloride ion, its size  
 (A) Remains unaltered  
 (B) Increases  
 (C) Decreases  
 (D) None of these
- Q10** In which of the following pair, both the species are isoelectronic but the first one is large in size than the second?  
 (A)  $\text{S}^{2-}$ ,  $\text{O}^{2-}$   
 (B)  $\text{Cl}^-$ ,  $\text{S}^{2-}$   
 (C)  $\text{F}^-$ ,  $\text{Na}^+$



(D)  $\text{N}^{3-}$ ,  $\text{P}^{3-}$





## Answer Key

Q1 (D)

Q2 (A)

Q3 (A)

Q4 (C)

Q5 (A)

Q6 (B)

Q7 (A)

Q8 (D)

Q9 (B)

Q10 (C)



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## Arjuna NEET (2026)

## Inorganic Chemistry

## Classification of Elements and Periodicity in Properties

DPP: 5

- Q1** The number of d-electrons in  $\text{Fe}^{2+}$  (atomic number = 26) is not equal to that of :  
 (A) p-electrons in  $_{10}\text{Ne}$   
 (B) s-electrons in  $_{12}\text{Mg}$   
 (C) d-electrons in  $\text{Fe}$   
 (D) p-electrons in  $\text{Cl}$
- Q2** The correct order of atomic/ionic radii is:  
 (A)  $\text{Sc} > \text{Ti} > \text{V} > \text{Cr}$   
 (B)  $\text{Co} > \text{Ni} > \text{Cu} > \text{Zn}$   
 (C)  $\text{S}^{2-} > \text{Cl}^- > \text{O}^{2-} > \text{N}^{3-}$   
 (D) None of these
- Q3** The size of the species,  $\text{Pb}, \text{Pb}^{2+}, \text{Pb}^{4+}$  decreases as:  
 (A)  $\text{Pb}^{4+} > \text{Pb}^{2+} > \text{Pb}$   
 (B)  $\text{Pb} > \text{Pb}^{2+} > \text{Pb}^{4+}$   
 (C)  $\text{Pb} > \text{Pb}^{4+} > \text{Pb}^{2+}$   
 (D)  $\text{Pb}^{4+} > \text{Pb} > \text{Pb}^{2+}$
- Q4** Lowest ionisation potential in periods is shown by:  
 (A) Inert gases  
 (B) Halogens  
 (C) Alkali metals  
 (D) Alkaline earth metals
- Q5** The ionic radii (in Å) of  $\text{N}^{3-}, \text{O}^{2-}$  and  $\text{F}^-$  are respectively:  
 (A) 1.71, 1.40 and 1.36  
 (B) 1.71, 1.36 and 1.40  
 (C) 1.36, 1.40 and 1.71  
 (D) 1.36, 1.71 and 1.40
- Q6** The radius of  $\text{La}^{3+}$  (atomic number:  $\text{La} = 57$ ) is 1.06 Å. Which one of the following given values will be closest to the radius of  $\text{Lu}^{3+}$  (atomic number:  $\text{Lu} = 71$ )?  
 (A) 1.60 Å  
 (B) 1.40 Å  
 (C) 1.06 Å  
 (D) 0.85 Å
- Q7** In which of the following the energy change corresponds to first ionization potential?  
 (A)  $\text{X}_{(\text{g})} \rightarrow \text{X}_{(\text{g})}^+ + \text{e}^-$   
 (B)  $2\text{X}_{(\text{g})} \rightarrow 2\text{X}_{(\text{g})}^+ + 2\text{e}^-$   
 (C)  $\text{X}_{(\text{s})} \rightarrow \text{X}_{(\text{g})}^+ + \text{e}^-$   
 (D)  $\text{X}_{(\text{aq})} \rightarrow \text{X}_{(\text{aq})}^+ + \text{e}^-$
- Q8** Which of the following transitions involves maximum amount of energy?  
 (A)  $\text{M}^-(\text{g}) \rightarrow \text{M}(\text{g})$   
 (B)  $\text{M}(\text{g}) \rightarrow \text{M}^+(\text{g})$   
 (C)  $\text{M}^+(\text{g}) \rightarrow \text{M}^{2+}(\text{g})$   
 (D)  $\text{M}^{2+}(\text{g}) \rightarrow \text{M}^{3+}(\text{g})$
- Q9**  $\text{Ce}^{3+}, \text{La}^{3+}, \text{Pm}^{3+}$  and  $\text{Yb}^{3+}$  have ionic radii in the increasing order as  
 (A)  $\text{La}^{3+} < \text{Ce}^{3+} < \text{Pm}^{3+} < \text{Yb}^{3+}$   
 (B)  $\text{Yb}^{3+} < \text{Pm}^{3+} < \text{Ce}^{3+} < \text{La}^{3+}$   
 (C)  $\text{La}^{3+} = \text{Ce}^{3+} < \text{Pm}^{3+} < \text{Yb}^{3+}$   
 (D)  $\text{Yb}^{3+} < \text{Pm}^{3+} < \text{La}^{3+} < \text{Ce}^{3+}$
- Q10** In the periodic table, metallic character of the elements shows one of the following trend:  
 (A) Decreases down the group and increases across the period  
 (B) Increases down the group and decreases across the period  
 (C) Increases across the period and also down the group  
 (D) Decreases across the period and also down the group



## Answer Key

Q1 (D)

Q2 (A)

Q3 (B)

Q4 (C)

Q5 (A)

Q6 (D)

Q7 (A)

Q8 (D)

Q9 (B)

Q10 (B)



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## Arjuna NEET 2026

## Inorganic Chemistry

DPP: 6

## Classification of Elements and Periodicity in Properties

- Q1** In which of the following the energy change corresponds to first ionization potential?
- (A)  $X_{(g)} \rightarrow X_{(g)}^+ + e^-$   
 (B)  $2X_{(g)} \rightarrow 2X_{(g)}^+ + 2e^-$   
 (C)  $X_{(s)} \rightarrow X_{(g)}^+ + e^-$   
 (D)  $X_{(aq)} \rightarrow X_{(aq)}^+ + e^-$
- Q2** Which one of the following element has the highest ionization energy?
- (A)  $[\text{Ne}]3s^23p^1$   
 (B)  $[\text{Ne}]3s^23p^2$   
 (C)  $[\text{Ne}]3s^23p^3$   
 (D)  $[\text{Ar}]3d^{10}4s^24p^3$
- Q3** The first ionisation potentials of Na, Mg, Al and Si are in the order
- (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)  $\text{Na} > \text{Mg} > \text{Al} < \text{Si}$
- Q4** A sudden large jump between the values of the second and third ionization energies of an element would be associated with the electronic configuration
- (A)  $1s^2, 2s^2, 2p^6, 3s^1$   
 (B)  $1s^2, 2s^2, 2p^6, 3s^2, 3p^1$   
 (C)  $1s^2, 2s^2, 2p^6, 3s^2, 3p^2$   
 (D)  $1s^2, 2s^2, 2p^6, 3s^2$
- Q5** The correct order of decreasing second ionization energy of Li, Be, Ne, C, B
- (A)  $\text{Ne} > \text{B} > \text{Li} > \text{C} > \text{Be}$   
 (B)  $\text{Li} > \text{Ne} > \text{C} > \text{B} > \text{Be}$   
 (C)  $\text{Ne} > \text{C} > \text{B} > \text{Be} > \text{Li}$   
 (D)  $\text{Li} > \text{Ne} > \text{B} > \text{C} > \text{Be}$
- Q6** The correct order of second I.E. of C, N, O and F are in the order:
- (A)  $\text{F} > \text{O} > \text{N} > \text{C}$   
 (B)  $\text{C} > \text{N} > \text{O} > \text{F}$   
 (C)  $\text{O} > \text{N} > \text{F} > \text{C}$   
 (D)  $\text{O} > \text{F} > \text{N} > \text{C}$
- Q7** The first, second and third ionisation energies ( $E_1, E_2 \& E_3$ ) for an element are 7eV, 12.5eV and 42.5 eV respectively. The most stable oxidation state of the element will be:
- (A) +1  
 (B) +4  
 (C) +3  
 (D) +2
- Q8** Which of the following iso - electronic ions has the lowest ionisation energy?
- (A)  $\text{K}^+$   
 (B)  $\text{Ca}^{2+}$   
 (C)  $\text{Cl}^-$   
 (D)  $\text{S}^{2-}$
- Q9** Which of the following relation is correct?
- (A)  $I^{\text{st}} \text{ IE of C} > I^{\text{st}} \text{ IE of B}$   
 (B)  $I^{\text{st}} \text{ IE of C} < I^{\text{st}} \text{ IE of B}$   
 (C)  $II^{\text{nd}} \text{ IE of C} > II^{\text{nd}} \text{ IE of B}$   
 (D) Both (B) and (C).
- Q10** The energy needed to remove one electron from unipositive ion is abbreviated as
- (A) 1<sup>st</sup> I.P.



- (B) 3<sup>rd</sup> I.P.
- (C) 2<sup>nd</sup> I.P.
- (D) 1<sup>st</sup> E.A.



## Answer Key

Q1 (A)

Q2 (C)

Q3 (A)

Q4 (D)

Q5 (D)

Q6 (D)

Q7 (D)

Q8 (D)

Q9 (A)

Q10 (C)



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## Arjuna NEET 2026

## Inorganic Chemistry

DPP: 7

## Classification of Elements and Periodicity in Properties

- Q1** Process,  $\text{Na}_{(g)}^+ \xrightarrow{\text{I}} \text{Na}_{(g)} \xrightarrow{\text{II}} \text{Na}_{(s)}$   
 (A) In (I) energy released, (II) energy absorbed  
 (B) In both (I) and (II) energy is absorbed  
 (C) In both (I) and (II) energy is released  
 (D) In (I) energy absorbed, (II) energy Released

- Q2**  $\text{O}_{(g)} + 2e^- \rightarrow \text{O}_{(g)}^{2-} \Delta_{\text{eg}}H = 603\text{KJ/mol}$   
 The positive value of  $\Delta_{\text{eg}}H$  is due to:  
 (A) Energy is released to add on  $1e^-$  to  $\text{O}^-$   
 (B) Energy is required to add on  $1e^-$  to  $\text{O}^-$   
 (C) Energy is needed to add on  $1e^-$  to  $\text{O}$   
 (D) None of the above is correct

- Q3** The electron affinity values for the halogens shows the following trend  
 (A)  $\text{F} < \text{Cl} > \text{Br} > \text{I}$   
 (B)  $\text{F} < \text{Cl} < \text{Br} < \text{I}$   
 (C)  $\text{F} > \text{Cl} > \text{Br} > \text{I}$   
 (D)  $\text{F} < \text{Cl} > \text{Br} < \text{I}$

- Q4** Which of the following configuration will have least electron affinity?  
 (A)  $ns^2np^5$   
 (B)  $ns^2np^2$   
 (C)  $ns^2np^3$   
 (D)  $ns^2np^4$

- Q5** The amount of energy released for the process  
 $\text{X}_{(g)} + e^- \rightarrow \text{X}^-(g)$   
 is minimum and maximum respectively for  
 (i) F  
 (ii) Cl  
 (iii) N  
 (iv) B

The correct answer is:

- (A) (iii) & (i)  
 (B) (iv) & (ii)  
 (C) (i) & (ii)  
 (D) (iii) & (ii)

- Q6** Which arrangement represents the correct order of electron gain enthalpy (with negative sign) of the given atomic species?  
 (A)  $\text{S} < \text{O} < \text{Cl} < \text{F}$   
 (B)  $\text{O} < \text{S} < \text{F} < \text{Cl}$   
 (C)  $\text{Cl} < \text{F} < \text{S} < \text{O}$   
 (D)  $\text{F} < \text{Cl} < \text{O} < \text{S}$

- Q7** Which of the following is affected by stable configuration of an atom?  
 (a) Electronegativity  
 (b) Ionization potential  
 (c) Electron affinity  
 Correct answer is:  
 (A) Only electronegativity  
 (B) Only ionization potential.  
 (C) Electron affinity and ionization potential  
 (D) All of the above

- Q8** The correct order of electron affinity is  
 (A)  $\text{Be} < \text{B} < \text{C} < \text{N}$   
 (B)  $\text{Be} < \text{N} < \text{B} < \text{C}$   
 (C)  $\text{N} < \text{Be} < \text{C} < \text{B}$   
 (D)  $\text{N} < \text{C} < \text{B} < \text{Be}$

- Q9** Second electron affinity of an element is  
 (A) Always exothermic  
 (B) Endothermic for few elements



- (C) Exothermic for few elements  
(D) Always endothermic

**Q10** In which of the following arrangements the order is not according to the property indicated against it?

- (A)  $\text{Li} < \text{Na} < \text{K} < \text{Rb}$  increasing metallic radius  
(B)  $\text{I} < \text{Br} < \text{F} < \text{Cl}$  increasing electron gain enthalpy (with negative sign)  
(C)  $\text{B} < \text{C} < \text{N} < \text{O}$  increasing first ionisation enthalpy  
(D)  $\text{Al}^{3+} < \text{Mg}^{2+} < \text{Na}^+ < \text{F}^-$  increasing ionic size





## Answer Key

Q1 (C)

Q2 (B)

Q3 (A)

Q4 (C)

Q5 (D)

Q6 (B)

Q7 (C)

Q8 (B)

Q9 (D)

Q10 (C)



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## Arjuna NEET 2026

## Inorganic Chemistry

DPP: 8

## Classification of Elements and Periodicity in Properties

- Q1** The electronegativity order of O, F, Cl and Br is:  
 (A)  $F > O > Cl > Br$   
 (B)  $F > Cl > Br > O$   
 (C)  $Br > Cl > F > O$   
 (D)  $F > Cl > O > Br$
- Q2** Correct order of electronegativity of N, P, C and Si is  
 (A)  $N < P < C < Si$   
 (B)  $N > C > Si > P$   
 (C)  $N = P > C = Si$   
 (D)  $N > C > P > Si$
- Q3** Least electronegative element is  
 (A) I  
 (B) Br  
 (C) C  
 (D) Cs
- Q4** Which is not the correct order for the stated property?  
 (A)  $Ba > Sr > Mg$ ; atomic radius  
 (B)  $F > O > N$ ; first ionisation enthalpy  
 (C)  $Cl > F > I$ ; electron affinity  
 (D)  $O > Se > Te$ ; electronegativity
- Q5** The first ionisation potential of Na is 5.1 eV. The value of electron gain enthalpy of  $Na^+$  will be  
 (A) -2.55 eV  
 (B) -5.1 eV  
 (C) -10.2 eV  
 (D) +2.55 eV
- Q6** Outermost electronic configuration of least electronegative element in the periodic table is  
 (A)  $2s^2 2p^5$   
 (B)  $3s^2 3p^5$   
 (C)  $2s^2 2p^4$   
 (D)  $6s^2 6p^6 7s^1$
- Q7** Which of the following process involves the gain of energy?  
 (A)  $O(g) + e^- \rightarrow O^-(g)$   
 (B)  $Na^+ + e^- \rightarrow Na$   
 (C)  $O^-(g) + e^- \rightarrow O^{2-}(g)$   
 (D)  $O^{2-}(g) \rightarrow O^-(g) + e^-$
- Q8** The ionization potentials of Li and K are 5.4 and 4.3 eV respectively. The ionization potential of Na will be:  
 (A) 9.7 eV  
 (B) 1.1 eV  
 (C) 4.9 eV  
 (D) cannot be calculated
- Q9** Arrange N, O and S in order of decreasing electron affinity:  
 (A)  $S > O > N$   
 (B)  $O > S > N$   
 (C)  $N > O > S$   
 (D)  $S > N > O$
- Q10** The correct values of ionisation energies (in  $\text{kJ mol}^{-1}$ ) of Si, P, Cl and S are respectively:  
 (A) 786, 1012, 999, 1256



- (B) 1012, 786, 999, 1256
- (C) 786, 1012, 1256, 999
- (D) 786, 999, 1012, 1256



## Answer Key

Q1 (A)

Q2 (D)

Q3 (D)

Q4 (B)

Q5 (B)

Q6 (D)

Q7 (C)

Q8 (C)

Q9 (A)

Q10 (C)



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## Arjuna NEET 2026

## Inorganic Chemistry

DPP: 9

## Classification of Elements and Periodicity in Properties

**Q1** Correct order of acidic strength is

- (A)  $\text{N}_2\text{O}_5 < \text{P}_4\text{O}_{10}$   
 (B)  $\text{CO}_2 < \text{SiO}_2$   
 (C)  $\text{B}_2\text{O}_3 < \text{BeO}$   
 (D)  $\text{HClO}_3 < \text{HClO}_4$

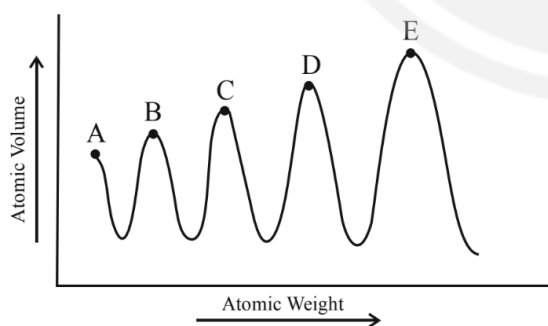
**Q2** Which one of the following is an amphoteric oxide?

- (A)  $\text{Na}_2\text{O}$   
 (B)  $\text{SO}_2$   
 (C)  $\text{B}_2\text{O}_3$   
 (D)  $\text{ZnO}$

**Q3** Which one of these is basic.

- (A)  $\text{CO}_2$   
 (B)  $\text{SnO}_2$   
 (C)  $\text{NO}_2$   
 (D)  $\text{SO}_2$

**Q4** In the Lothar - Mayer graph, A, B, C, D & E element are:



- (A) Halogens  
 (B) Alkaline earth metals  
 (C) Alkali metals  
 (D) Transition metals

**Q5** The electronegativity of Cl, F, O, S increases in the order of

- (A) S, O, Cl, F  
 (B) S, Cl, O, F  
 (C) Cl, S, O, F  
 (D) S, O, C, Cl

**Q6** Which of the following is/are Dobereiner's triad?

- (a) P, As, Sb  
 (b) Cu, Ag, Au  
 (c) Fe, Co, Ni  
 (d) S, Se, Te

Correct answer is

- (A) a and b  
 (B) b and c  
 (C) a and d  
 (D) All

**Q7** Which of the following sets of elements follows Newland's octave rule?

- (A) Be, Mg, Ca  
 (B) Na, K, Rb  
 (C) F, Cl, Br  
 (D) B, Al, Ga

**Q8** According to the Newland's law of octaves, the properties of fluorine are similar to those of.....

- (A) Hydrogen  
 (B) Lithium  
 (C) Sodium  
 (D) Potassium

**Q9** According to Lothar Meyer's curve, which of the following statement is correct?

- (A) The elements having similar properties will occupy the same position in the curve  
 (B) Halogens are present on the ascending part of the curve  
 (C) The atomic volume of the elements in a period initially decreases and then increases



(D) All of these

**Q10** Mendeleev's periodic table is based on:

- (A) Atomic number
- (B) Increasing order of number of protons
- (C) Electronic configuration
- (D) Atomic weight

**Q11** The plot of square root of frequency of X-ray emitted against atomic number led to suggestion of which law/rule?

- (A) Periodic Law
- (B) Modern periodic Law
- (C) Hund's rule
- (D) Newland's Law

**Q12** Which is not anomalous pair of elements in the Mendeleev's periodic table?

- (A) Ar and K
- (B) Co and Ni
- (C) Te and I
- (D) Al and Si

**Q13** Law of octaves stated,

- (A) Every eighth element had properties similar to the first element
- (B) Every third element had properties similar to the first element
- (C) The properties of the middle element were in between the other two members
- (D) The properties of the elements were repeated after regular intervals of 3, 4 or 8 elements.

**Q14** Which one of the following statements is incorrect?

- (A) Greater is the nuclear charge, greater is the electron gain enthalpy
- (B) Nitrogen has almost zero electron gain enthalpy
- (C)

Electron gain enthalpy decreases from fluorine to iodine in the group

(D) Chlorine has highest electron gain enthalpy

**Q15** In the periodic table, metallic character of the elements shows one of the following trend:

- (A) Decreases down the group and increases across the period
- (B) Increases down the group and decreases across the period
- (C) Increases across the period and also down the group
- (D) Decreases across the period and also down the group



## Answer Key

Q1 (D)

Q2 (D)

Q3 (B)

Q4 (C)

Q5 (B)

Q6 (C)

Q7 (A)

Q8 (A)

Q9 (D)

Q10 (D)

Q11 (B)

Q12 (D)

Q13 (A)

Q14 (C)

Q15 (B)



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