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NEET CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES — IONISATION ENTHALPY — PYQS

Max. Marks: 40 **Questions:** 10

Section A (MCQ) — 10 questions

Q.1 Given below are two statements: One is labelled as **Assertion A** and the other is labelled as **Reason R**.

In light of the above statements, choose the most appropriate answer from the options given below:
Assertion (A): The first ionization enthalpy of O is lower than that of N and F.
Reason (R): The loss of an electron from O leads to stable half-filled p orbital [RE-NEET (UG) 2026]

(1) A is not correct but R is correct
(2) Both A and R are correct and R is the correct explanation of A
(3) Both A and R are correct and R is NOT the correct explanation of A
(4) A is correct but R is not correct.

Scan or tap for the full solution

Q.2 Which of the following statements are true?
A. Unlike Ga that has a very high melting point, Cs has a very low melting point.
B. On Pauling scale, the electronegativity values of N and Cl are not the same.
C. Ar, K^+, Cl^-, Ca^{2+}, and S^{2-} are all isoelectronic species.
D. The correct order of the first ionization enthalpies of Na, Mg, Al, and Si is Si > Al > Mg > Na.
E. The atomic radius of Cs is greater than that of Li and Rb.
Choose the correct answer from the options given below : [NEET (UG) 2025]

(1) C and D only (2) A, C, and E only
(3) A, B, and E only (4) C and E only

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Q.3 Arrange the following elements in increasing order of first ionization enthalpy: Li, Be, B, C, N
Choose the correct answer from the options given below: [NEET (UG) 2024]

(1) Li < Be < B < C < N (2) Li < B < Be < C < N
(3) Li < Be < C < B < N (4) Li < Be < N < B < C

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Q.4 The correct order of first ionization enthalpy for the given four elements is : [NEET (UG) 2022 (Phase 2)]

(1) C < F < N < O (2) C < N < F < O
(3) C < N < O < F (4) C < O < N < F

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Q.5 If first ionization enthalpies of elements X and Y are 419 kJ mol^{-1} and 590 kJ mol^{-1}, respectively and second ionization enthalpies of X and Y are 3069 kJ mol^{-1} and 1145 kJ mol^{-1}, respectively. Then correct statement is : [NEET (UG) 2022 (Phase 2)]

(1) Both X and Y are alkaline earth metals
(2) X is an alkali metal and Y is an alkaline earth metal
(3) X is an alkaline earth metal and Y is an alkali metal
(4) Both X and Y are alkali metals

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Q.6 For the second period elements the correct increasing order of first ionization enthalpy is : [NEET (UG) 2019]

(1) Li < B < Be < C < N < O < F < Ne
(2) Li < Be < B < C < O < N < F < Ne
(3) Li < B < Be < C < O < N < F < Ne
(4) Li < Be < B < C < N < O < F < Ne

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Q.7 Amongst the elements with following electronic configurations, which one of them may have the highest ionisation energy ? [AIPMT 2009]

(1) [Ne] $3s^2\ 3p^2$ (2) [Ar] $3d^{10}\ 4s^2\ 4p^3$
(3) [Ne] $3s^2\ 3p^1$ (4) [Ne] $3s^2\ 3p^3$

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Q.8 With which of the following electronic configuration an atom has the lowest ionisation enthalpy? [AIPMT 2007]

(1) $1s^2\ 2s^2\ 2p^3$ (2) $1s^2\ 2s^2\ 2p^6\ 3s^1$

(3) $1s^2\ 2s^2\ 2p^6$ (4) $1s^2\ 2s^2\ 2p^5$

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Q.9 Which of the following order is wrong? [AIPMT 2002]

(1) $NH_3 < PH_3 < AsH_3$ – acidic

(2) Li < Be < B < C – 1st IP

(3) $Al_2O_3 < MgO < Na_2O < K_2O$ – basic

(4) $Li^+ < Na^+ < K^+ < Cs^+$ – ionic radius

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Q.10 Correct order of 1st ionization potential among following elements Be, B, C, N, O is [AIPMT 2001]

(1) B < Be < C < O < N (2) B < Be < C < N < O

(3) Be < B < C < N < O (4) Be < B < C < O < N

Scan or tap for the full solution

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	
Ans.	**2**	**4**	**2**	**4**	**2**	**3**	**4**	**2**	**2**	**1**	