

JEE MAIN CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES — ATOMIC RADIUS AND IONIC RADIUS — PYQS

Max. Marks: 20

Questions: 5

Section A (MCQ) — 5 questions

Q.1 In period 4 of the periodic table, the elements with highest and lowest atomic radii are respectively.

[JEE Main 2026 (Online) 28th January Morning Shift]

(1) Rb & Br (2) Na & Cl (3) K & Br (4) K & Se

Scan or tap for the
full solution



Q.2 Given below are two statements :

Statement-I: The correct order in terms of atomic/ionic radii is $\text{Al} > \text{Mg} > \text{Mg}^{2+} > \text{Al}^{3+}$.

Statement-II: The correct order in terms of the magnitude of electron gain enthalpy is $\text{Cl} > \text{Br} > \text{S} > \text{O}$.

In the light of the above statements, choose the correct answer from the options given below :

[JEE Main 2026 (Online) 21st January Evening Shift]

- (1) Statement-I is true but Statement-II is false
 (2) Both Statement-I and Statement-II are true
 (3) Statement-I is false but Statement-II is true
 (4) Both Statement-I and Statement-II are false

Scan or tap for the
full solution



Q.3 Choose the incorrect trend in the atomic radii (r) of the elements.

[JEE Main 2025 (Online) 7th April Evening Shift]

(1) $r_{\text{Rb}} < r_{\text{Cs}}$ (2) $r_{\text{At}} < r_{\text{Cs}}$ (3) $r_{\text{Br}} < r_{\text{K}}$ (4) $r_{\text{Mg}} < r_{\text{Al}}$

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full solution



Q.4 Given below are two statements :

Statement-I: The radii of isoelectronic species increase in the order:

$\text{Mg}^{2+} < \text{Na}^+ < \text{F}^- < \text{O}^{2-}$

Statement-II: The magnitude of electron gain enthalpy of halogens decreases in the order:

$\text{Cl} > \text{F} > \text{Br} > \text{I}$

In the light of the above statements, choose the most appropriate answer from the options given below :

[JEE Main 2025 (Online) 29th January Morning Shift]

- (1) Statement-I is incorrect but Statement-II is correct
 (2) Both Statement-I and Statement-II are correct
 (3) Statement-I is correct but Statement-II is incorrect
 (4) Both Statement-I and Statement-II are incorrect

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Q.5 The incorrect decreasing order of atomic radii is

[JEE Main 2025 (Online) 28th January Morning Shift]

- (1) $\text{Si} > \text{P} > \text{Cl} > \text{F}$ (2) $\text{Mg} > \text{Al} > \text{C} > \text{O}$
 (3) $\text{Al} > \text{B} > \text{N} > \text{F}$ (4) $\text{Be} > \text{Mg} > \text{Al} > \text{Si}$

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2	3	4	5						
Ans.	3	3	4	2	4						