

JEE MAIN D- AND F-BLOCK ELEMENTS — IONISATION ENTHALPY OF D-BLOCK ELEMENTS — PYQS

Max. Marks: 20
Questions: 5

Section A (MCQ) — 5 questions

Q.1 The correct order of first ($\Delta_i H_1$) and second ($\Delta_i H_2$) ionisation enthalpy values of Cr and Mn are :

- A. $\Delta_i H_1$: Cr > Mn B. $\Delta_i H_2$: Cr > Mn
 C. $\Delta_i H_1$: Mn > Cr D. $\Delta_i H_2$: Mn > Cr

Choose the correct answer from the options given below : [JEE Main 2026 (Online) 6th April Evening Shift]

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

Scan or tap for the full solution



Q.2 Given below are two statements :

Statement-I: Among Zn, Mn, Sc and Cu, the energy required to remove the third valence electron is highest for Zn and lowest for Sc.

Statement-II: The correct order of the following complexes in terms of CFSE is $[\text{Co}(\text{H}_2\text{O})_6]^{2+} < [\text{Co}(\text{H}_2\text{O})_6]^{3+} < [\text{Co}(\text{en})_3]^{3+}$.

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

[JEE Main 2026 (Online) 2nd April Evening Shift]

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

Scan or tap for the full solution



Q.3 Among Fe^{2+} , Fe^{3+} , Cr^{2+} and Zn^{2+} , the ion that shows positive borax bead test and with highest ionisation enthalpy is :

[JEE Main 2026 (Online) 2nd April Evening Shift]

- (1) Fe^{2+} (2) Zn^{2+} (3) Cr^{2+} (4) Fe^{3+}

Scan or tap for the full solution



Q.4 Given below are two statements :

Statement-I: The first ionization enthalpy of Cr is lower than that of Mn.

Statement-II: The second and third ionization enthalpies of Cr are higher than those of Mn.

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

[JEE Main 2026 (Online) 22nd January Evening Shift]

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

Scan or tap for the full solution



Q.5 The incorrect relationship in the following pairs in relation to ionisation enthalpies is :

[JEE Main 2025 (Online) 4th April Evening Shift]

- (1) $\text{Mn}^{2+} < \text{Fe}^{2+}$ (2) $\text{Mn}^+ < \text{Mn}^{2+}$
 (3) $\text{Mn}^+ < \text{Cr}^+$ (4) $\text{Fe}^{2+} < \text{Fe}^{3+}$

Scan or tap for the full solution



ANSWER KEY

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