

JEE MAIN D- AND F-BLOCK ELEMENTS — OXIDATION STATES OF LANTHANIDS — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ) — 3 questions

- Q.1** Which of the following ions is the strongest oxidizing agent? (Atomic Number of Ce = 58, Eu = 63, Tb = 65, Lu = 71)

[JEE Main 2025 (Online) 24th January Morning Shift]

- (1) Lu^{3+} (2) Eu^{2+} (3) Tb^{4+} (4) Ce^{3+}

Scan or tap for the full solution



- Q.2** Which of the following acts as a strong reducing agent? (Atomic number: Ce = 58, Eu = 63, Gd = 64, Lu = 71)

[JEE Main 2024 (Online) 29th January Evening Shift]

- (1) Eu^{2+} (2) Gd^{3+} (3) Lu^{3+} (4) Ce^{4+}

Scan or tap for the full solution



- Q.3** Given below are two statements :

Statement-I: In the Lanthanoids, the formation of Ce^{+4} is favoured by its noble gas configuration.

Statement-II: Ce^{+4} is a strong oxidant reverting to the common +3 state.

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

[JEE Main 2024 (Online) 27th January Evening Shift]

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

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3								
Ans.	3	1	3								