

## JEE Main 29 January 2024 Shift 2 Answer Key

### Chemistry

Q.1: From the given ions, which is the best-reducing agent ( $\text{Lu}^{3+}$ ,  $\text{Nd}^{3+}$ ,  $\text{Ce}^{4+}$ ,  $\text{Gd}^{2+}$ )?

A.1:  $\text{Gd}^{2+}$

Q.2: State the oxidation state of Iron in the complex formed in the brown ring test.

A.1: +1/+3

Q.3: State the reason behind the oxygen showing anomalous behavior.

A.1: Small size, high electronegativity, absence of vacant d- orbital

Q.4: What will be the IUPAC name of the compound where in a cyclohexane ring, the alkene is in the second position and in the first position there is alcohol (OH).

A.4:

Q.5: From the given options which has the highest 1<sup>st</sup> ionization energy (Si, Al, C, N)?

A.5: N

Q.6: Nessler's Reagent gives brown colour with?

A.6: DMG

Q.7: Among the given list which of the following compounds has zero dipole moment ( $\text{NH}_3$ ,  $\text{H}_2\text{O}$ , HF,  $\text{CO}_2$ , SO,  $\text{BF}_3$ ,  $\text{CH}_4$ )?

A.7:  $\text{H}_2\text{O}$