

**Physical Science Syllabus for UTSE-2023(Final Level) for  
Class-IX Selected from the 1<sup>st</sup> Level UTSE-2023 held in  
February 2023 for class VIII**

**(To be held on 19<sup>th</sup> November, 2023 at 12 pm at  
Uranium Centre, Cuttack)**

**Chemistry:**

1. Symbol, Valency and formula Writing, Empirical and Molecular Formula
2. Ions from formula units
3. Types of chemical bonding: Ionic and Covalent with examples.
4. Balancing of Chemical Equations by Hit & Trial and Algebraic methods
5. Atomic Mass, Isotopic Masses, Molecular Masses
6. MOLE CONCEPT including Gram Molar Volume(STP) concept
7. Stoichiometric Calculations with mole-mole, mass-mass, mass-volume relationships.
8. Solubility Rules and Ionic Equations
9. Oxidation and Reduction in the light of electron Loss and Gain
10. Oxidation Number(ON); Assigning ON in Redox reactions, Oxidation/Reduction;  
Oxidant/Reductant,
11. Ten types of Non-Redox Reactions
12. Some common Redox Reactions

*(N.B: Maximum number of questions in Chemistry will be set from Mole concept)*

**Physics:**

1. Motion, Speed, Velocity, Average and Instantaneous Velocity, Graphs
2. Acceleration, Uniform Acceleration, Equations of Motion and Graphs
3. Free Fall under gravity and related numericals.
4. Forces and Newton's Laws of Motion
5. Work, Power and Energy
6. Vectors and Scalars, Addition of Vectors by Triangle Law and Parallelogram of Forces

*N.B : 1. Detailed study on all these chapters is required as per the lectures delivered in the 7-Day Advanced Physical Sciences Camp for Class-IX(Odia Medium) during 21-27, October, 2023.*

*2. There will be 40 to 50 MCQs with +4/-1 Evaluation system with a time limit of 90 minutes.*