TG EAPCET Chemistry

Complete 5-Year Chapter-Wise Weightage Analysis & Smart Prep Ebook

About This Ebook: This guide breaks down the Chemistry section of the Telangana Engineering, Agriculture, and Medical Common Entrance Test (TG EAPCET). Over the last 5 years, Chemistry has consistently contributed 40 vital marks out of the total 160. This analysis shows you exactly which high-yield topics will give you the best return on your study hours.

1. Section-Wise Master Breakdown

TG EAPCET Chemistry is perfectly balanced between three core branches. Based on historical papers, the marks distribution trends as follows:

- **Inorganic Chemistry (approx. 35% - 37%):** High scoring, fully based on factual memory and NCERT/Board concepts.
- **Physical Chemistry (approx. 32% - 33%):** Numerical heavy. It requires clean application of formulas and clear basic concepts.
- **Organic Chemistry (approx. 30% - 33%):** Conceptual and interconnected. It relies heavily on mechanism steps and name reactions.

2. Complete Chapter-Wise Weightage Table

The following table details the average question distribution and percentage weightage over the last 5 years of the TG EAPCET exam:

S.No.	Chapter / Topic Name	Avg. Questions (Out of 40)	Weightage (%)	Priority Level
1	**p-Block Elements (Groups 13 to 18)**	**3 - 4**	**9.0%**	**HIGH**
2	**Chemical Bonding & Molecular Structure**	**3**	**8.0%**	**HIGH**
3	**Solutions & Colligative Properties**	**3**	**7.0%**	**HIGH**
4	**Atomic Structure**	**2**	**5.0%**	**HIGH**
5	**Classification of Elements (Periodicity)**	**2**	**5.0%**	**HIGH**
6	Thermodynamics & Thermochemistry	1 - 2	4.0%	MEDIUM
7	Hydrocarbons (Alkanes, Alkenes, Alkynes)	1 - 2	4.0%	MEDIUM
8	States of Matter (Gases & Liquids)	1 - 2	4.0%	MEDIUM
9	Chemical Kinetics	1	3.0%	MEDIUM
10	Solid State	1	3.0%	MEDIUM
11	Carboxylic Acids & Derivatives	1	3.0%	MEDIUM
12	Polymers	1	3.0%	MEDIUM
13	s-Block Elements (Alkali & Alkaline Earth)	1	2.0%	MEDIUM
14	d and f-Block Elements	1	2.0%	MEDIUM
15	General Principles of Metallurgy	1	2.0%	MEDIUM
16	Aldehydes, Ketones & Alcohols	1	2.0%	MEDIUM
17	Haloalkanes & Haloarenes	1	2.0%	MEDIUM
18	Carbohydrates & Biomolecules	1	2.0%	MEDIUM
19	Stoichiometry & Mole Concept	0 - 1	1.0%	LOW

S.No.	Chapter / Topic Name	Avg. Questions (Out of 40)	Weightage (%)	Priority Level
20	Surface Chemistry	0 - 1	1.0%	LOW
21	Coordination Compounds	0 - 1	1.0%	LOW
22	Basic Principles of Organic Chemistry	0 - 1	1.0%	LOW
23	Amines & Nitrogen Compounds	0 - 1	1.0%	LOW

3. Deep-Dive: Top 5 High-Weightage Core Chapters

A. p-Block Elements (9.0% Weightage)

This is the largest chapter in the inorganic syllabus. Questions target trends in oxidation states, anomalous properties of first elements, and structural formulas of oxoacids (especially Phosphorus and Sulfur). Make sure to memorize specific chemical reactions and catalysts mentioned in your text.

B. Chemical Bonding & Molecular Structure (8.0% Weightage)

This forms the backbone of all chemistry. Focus deeply on **VSEPR Theory** to predict molecular geometry and shapes. Master the calculation of hybridization and Molecular Orbital Theory (MOT) to find bond order, magnetic behavior, and stability differences.

C. Solutions & Colligative Properties (7.0% Weightage)

A formula-heavy chapter that guarantees high marks if practiced well. Focus on concentration terms like Molarity, Molality, and Mole Fraction. Expect direct numerical problems on Colligative Properties (like elevation of boiling point or depression of freezing point) involving the **Van 't Hoff Factor (i)**.

D. Atomic Structure (5.0% Weightage)

Highly scoring and overlaps cleanly with Physics. Master Bohr's atomic model formulas (radius, velocity, and energy transitions). Pay critical attention to Quantum Numbers, electronic configurations, and rules like Heisenberg's Uncertainty Principle and Pauli's Exclusion Principle.

E. Classification of Elements & Periodicity (5.0% Weightage)

A simple yet foundational chapter. You must master the trend patterns across groups and periods for Ionic Radii, Ionization Enthalpy, Electron Gain Enthalpy, and Electronegativity. Watch out for exceptions (like Nitrogen vs Oxygen ionization energy).

💡 High-Yield Preparation Tips for TG EAPCET

1. **NCERT / State Board Textbooks:** 85%+ of chemistry questions in TG EAPCET are pulled directly from board textbooks line by line, especially for Inorganic and Organic Chemistry.
2. **Formula Log:** Maintain a separate notebook for quick-glance Physical Chemistry formulas and constant values.
3. **Name Reactions:** Write down all primary organic name reactions (e.g., Aldol, Cannizzaro, Wurtz) on a single sheet for weekly revision.