

List of Thermodynamics Topics in TG EAMCET 2025

Name of the topics	Name of the sub-topics
Physics	<ul style="list-style-type: none"> ⑩ Introduction ⑩ Thermal equilibrium ⑩ Zeroth law of thermodynamics ⑩ Heat ⑩ Internal Energy and work ⑩ First law of thermodynamics ⑩ Specific heat capacity ⑩ Specific heat capacity of water ⑩ Thermodynamic state variables and equation of State ⑩ Thermodynamic process ⑩ Quasistatic process ⑩ Isothermal Process ⑩ Adiabatic Process ⑩ Isochoric Process ⑩ Isobaric process ⑩ Cyclic process ⑩ Heat engines ⑩ Refrigerators and heat pumps ⑩ Second law of thermodynamics ⑩ Reversible and irreversible processes ⑩ Carnot engine ⑩ Carnot's theorem
Chemistry	<ul style="list-style-type: none"> ⑩ Thermodynamic Terms ⑩ The system and the surroundings ⑩ Types of systems and surroundings ⑩ The state of the system ⑩ The Internal Energy as a State Function ⑩ (a) Work (b) Heat (c) The general case, the first law of Thermodynamics ⑩ Applications ⑩ Work ⑩ Enthalpy ⑩ H- a useful new state function ⑩ Extensive and intensive properties ⑩ Heat ⑩ Capacity ⑩ The relationship between C_p and C_v ⑩ Measurement of ΔU and ΔH ⑩ Calorimetry ⑩ Enthalpy change

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| | <ul style="list-style-type: none">⑩ $\Delta_r H$ of reactions - reaction Enthalpy (a) Standard enthalpy of reaction (b) Enthalpy changes during transformations, (c) Standard enthalpy of formation, (d) Thermochemical equations (e) Hess's law of constant heat summation⑩ Enthalpies for different types of reactions. (a) Standard enthalpy of combustion ($\Delta_c H^\theta$), (b) Enthalpy of atomization ($\Delta_a H^\theta$), phase transition, sublimation, and ionization, (c) Bond Enthalpy ($\Delta_{\text{bond}} H^\theta$), (d) Enthalpy of solution ($\Delta_{\text{sol}} H^\theta$) and dilution; Spontaneity. (a) Is the decrease in enthalpy a criterion for spontaneity? (b) Entropy and spontaneity, the second law of thermodynamics, (c) Gibbs Energy and spontaneity⑩ Gibbs Energy change and equilibrium⑩ Absolute entropy and the third law of thermodynamics. |
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