

week 1 (July 16th - July 21st)

Heat, work, types of system, extensive properties, intensive properties.

week 2 (July 23rd - July 28th)

State function, path function, macroscopic properties, Internal energy, zeroth law of thermodynamics.

week 3 (July 30th - Aug 4th)

Heat capacities (at const volume & const pressure), Introduction of 1st law of thermodynamics.

week 4 (Aug 6th - Aug 11th)

Objectives of 1st law of thermodynamics, Limitations of 1st law of thermodynamics.

week 5 (Aug 13th - Aug 18th)

Joule's Law, Joule Thompson Experiment, Joule Thompson Coefficient.

week 6 (Aug 20th - Aug 25th)

Joule Thompson coefficient for ideal gas & real gas, Inversion Temp.

week 7 (Aug 27th - Sep 1st)

Calculation of w , q , dE & dH for expansion of ideal gas under isothermal & adiabatic conditions for reversible process, Kirchoff's Equation, Bond Energies & their applications.

week 9 (Sep 10th - Sep 15th)

Partial Molar Quantities, Concept of Chemical Potential
Gibbs Duhem Equation.

week 10 (Sep 17th - Sep 22nd)

Thermodynamic derivation of law of chemical eq^m,
Van't Hoff reaction isochore; Van't Hoff reaction isotherm.

week 11 (Sep 24th - Sep 29th)

Le Chatelier's Principle & its applications, Clausius-
Clapeyron Equation & its applications.

week 12 (Oct 1st - Oct 6th)

Nernst Distribution law, its thermodynamic derivation

week 13 Oct 8th - Oct 13th

Modification of distribution law when solute undergoes
dissociation

week 14 (Oct 15th - Oct 20th)

Modification of distribution law when solute undergoes
association.

week 15 (Oct 22nd - Oct 27th)

Modification of distribution law when solute
undergoes combination with solute.

week 16 (Oct 29th - Nov. 3rd)

Applications of distribution law, Test

Week 17 (Nov. 5th - Nov 17th)

(2)

(Diwali Break), Determination of degree of hydrolysis & hydrolysis constant of aurine hydrochloride.

Week 18 (Nov 19th - Nov 24th)

Determination of equilibrium constant of potassium tri-iodide complex & process of extraction.

Week 17 (Nov 5th - Nov 17th)

(2)

(Diwali Break), Determination of degree of hydrolysis & hydrolysis constant of aniline hydrochloride.

Week 18 (Nov 19th - Nov 24th)

Determination of equilibrium constant of potassium tri-iodide complex & process of extraction.