Sangola Taluka Shetkari shikshan Prasarak Mandal's

VIDNYAN MAHAVIDYALA, SANGOLA

(Teaching Plan)

Department Of Chemistry

Name of Faculty**: Mr. A. R. Ingawale** (Associate Professor)

Academic Year**: 2020 – 21**   Class: **B.Sc. I**   Semesters**: I**

Paper No. **: I**   Paper Name**: Physical chemistry**

Sr.No.	Class	Month	Chapter Details
1	B.Sc. I	July	**3. Thermodynamics: (Contact hrs: 04)** 3.1 Spontaneous and non spontaneous processes, Second law of thermodynamics and its different statements. 3.2 Carnot's Theorem (Heat engine), Carnot cycle and its efficiency. (Numerical Problems Expected)
2	B.Sc. I	August	**4. Gaseous State: (Contact hrs: 10)** 4.1 a) Ideal and Non ideal gases, b) Deviation from ideal behaviour. (Only Boyle's law) c) Causes of deviation, van der Waal's equation, explanation of real gas behavior by van der Waal's equation. 4.2 Critical Phenomena : PV-Isotherms of real gases (Andrew's isotherms), continuity of state, Relationship between critical constants and van der Waal's constants. 4.3 Liquification of gases, Joule-Thomson effect. (Numerical Problems expected)
3	B.Sc. I	September	**1. Chemical Kinetics (Contact hrs: 12)** 1.1 Chemical Kinetics and it's scope, Rate of reaction, Definition and units of rate constant. Factors affecting rate of reaction. Concentration, pressure, temperature and catalyst. 1.2 Order and Molecularity of reaction.

			1.3 First order reaction: Derivation of Rate constant. Characteristics of first order reaction. Examples: Decomposition of N2O5 1.4 Second order reaction: Derivation of rate constant for equal and unequal concentration of the reactants. Characteristics of Second order reaction. Examples : i) Reaction between K2S2O8 and KI .
4	B.Sc. I	October	1.5 Pseudo-unimolecular reactions such as Hydrolysis of methyl acetate in presence of Acid. (Numerical Problems Expected)