

## 2. A Syllabus of the Work in Outline

SEM - I

(C.D.T)

Kinetic theory and Gaseous State

Kinetic theory of gases & concept of pressure and temperature, collision of gas molecules; collision diameter; collision number and mean free path; Frequency of binary collisions; wall collision and rate of effusion.

Maxwell's distribution of speed and energy  $\Rightarrow$  Maxwell's distribution of speed. Kinetic energy distribution:

calculation of average, root-mean square and most probable values; calculation of numbers of molecules having energy  $\geq \epsilon$ ; equipartition of energy and its application.

Real gas and van der Waals equation  $\Rightarrow$  Deviation of gases from ideal behaviour, compressibility factor, Boyle temp<sup>n</sup>, Andrews and Arragat's plot, van der Waals equation; van der Waals intermolecular forces.

Chemical kinetics  $\Rightarrow$  Rate law, Extent of reaction; rate constants; orders; forms of rates of first, second and nth orders; reactions; pseudo first order reactions; opposing reaction; consecutive reactions and parallel reactions. Arrhenius equation, collision theory, Lindemann theory, transition state, homogeneous catalysis; salt effect, Michaelis-Menten equation, Lineweaver-Burk plot, turn-over number; autocatalytic reactions.

C.P.

Experiment 1  $\Rightarrow$  Determination of pH of unknown solution (buffer); by color matching method.

Experiment 2  $\Rightarrow$  Study of kinetics of decomposition of  $H_2O_2$ .

SEM-II

(CgT.)

Application of thermodynamics - I  $\Rightarrow$  chemical potential and activity, partial molar quantities, reaction between chemical potential and Gibbs' free energy and other thermodynamic state functions; chemical potential ( $\mu$ ); Gibbs-Duhem eqn; fugacity, equation of state, change in  $G, S, H$  and  $V$  during mixing for binary soln; chemical equilibrium  $\Leftrightarrow$  thermodynamic conditions for equilibrium, van't Hoff's reaction isotherm; definitions of  $K_0$ ,  $K_c$  and  $K_p$ ; van't Hoff's reaction isobar and isochore, Raoult's distribution law.

viscosity  $\Rightarrow$  General features of fluid flow; Newton's equation, viscosity coefficient; Poiseuille's equation; principle of determination of viscosity co-efficient of liquids by falling sphere method; Temperature variation of viscosity of liquids and comparison with that of gases.

CgP.

Experiment 1: Study of viscosity of unknown liquid (glycerol, sugar) with respect to water.

Experiment 2: Determination of partition co-efficient for the distribution of  $I_2$  between water and  $ccl_4$ .

Experiment 3: Determination of  $K_{eq}$  for  $KI + I_2 \rightleftharpoons KI_2$ , using partition co-efficient between water and  $ccl_4$ .

SEM - IV [CgT]

Application of thermodynamics - II  $\Rightarrow$  colligative properties  $\Rightarrow$  vapour pressure of solution; ideal solution, ideally dilute solution and colligative property; Raoult's law; Thermodynamic derivation using chemical potential to derive relations b/w the four colligative property (i) relative lowering of vapour pressure (ii) elevation of boiling point (iii) depression of freezing point

### 3. Detailed Syllabus

#### (A) First Term

From ..... 2021 To ..... 2022

(iv) osmotic pressure and amount of solute. Applications in calculating molar mass of non-electrolytes, dissociated and associated solutes in solution; Abnormal colligative property.

Phase rule  $\Rightarrow$  Definitions of phase, component and degree of freedom; Phase rule and its derivations; Definition of phase diagram; Phase diagram of water,  $\text{CO}_2$ , Sulphur. First order phase transition and Clapeyron equation; Clapeyron equation - derivation and use; Liquid vapour equilibrium for  $\approx$  two component systems; Phenol-water system. Three component systems, water-chloroform-acetic acid system, triangular plots.

Binary solutions  $\Rightarrow$  Ideal solution at fixed temperature and pressure, principle of fractional distillation, Raoult-Margules equation; Henry's law; Raoult's law; Positive and negative deviations ideal behavior; Azeotropic solution; Liquid-liquid phase diagram using phenol-water system; Solid-liquid phase diagram; Eutectic mixture.

[C & P]

Experiment-1 : Potentiometric titration of Mohr's Salt Solution against Standard  $\text{K}_2\text{CrO}_4$  solution.

Experiment-2 : Study of Phenol-water phase diagram.

SEM-V [DEF-1T]

Brown's Lattice and Laws of crystallography  $\Rightarrow$  Types of Solid, Bragg's law of diffraction; Laws of crystallography [Harij's law and Steno's law]; permissible symmetry axes; in crystals; Lattice, Space lattice, unit cell, crystal planes, Bravais' lattice. Packing of uniform hard spheres, close packed arrangements (fcc and hcp); Tetrahedral and octahedral voids. void space in P-type, F-type and I-type cubic systems.

Crystal planes  $\Rightarrow$  Distance between consecutive planes [cubic, tetragonal and orthorhombic lattices]; Indexing of planes, Miller indices; calculation of d<sub>hkl</sub>; Relation between molar mass and unit cell dimension for cubic system; Bragg's law (derivation).

Determination of crystal Structure: Powder method; Structure of NaCl and kec crystals.

specific heat of solid: co-efficient of thermal expansion, thermal compressibility of solids; Dulong-Petit's law; perfect crystal model, Einstein's theory - derivation from partition function, limitations; Debye's  $\tau^3$  law - analysis of the two end-members.  
3rd law  $\Rightarrow$  Absolute entropy, Planck's law, calculation of entropy, Helmholtz heat theorem.

Adiabatic demagnetization: Approach to zero kelvin, adiabatic cooling, demagnetization, adiabatic demagnetization-induced cooling  
Polymer  $\Rightarrow$  classification of polymers, nomenclature, molecular forces and chemical bonding in polymers, texture of polymers; criteria for synthetic polymer formation; Relationships between functionality; extent of reaction and degree of polymerization; mechanism and kinetics of step growth and copolymerization; conducting polymers.

$$SEM \rightarrow I [C_4HT]$$

Lambert-Beer's law: electromagnetic radiation; Lambert-Beer's law and its extimation, Stark-Einstein law of Photochemical equivalence, quantum yield, actinometry.

photochemical processes  $\Rightarrow$  Frank-Candan principle, Bond dissociation; Decay of excited states by radiative and non-radiative paths, Pre-dissociation; fluorescence and phosphorescence; Jablonski diagram. Photochemical reaction, photo-stationary state, H<sub>2</sub>-decomposition, A<sub>2</sub>-BP<sub>2</sub> reaction, dimerisation of anthracene, photoisomerized reaction, quenching rate, photo-stationary states; chemiluminescence.

Surface tension  $\Rightarrow$  Surface tension, surface energy, excess pressure, capillary rise and surface tension, work of cohesion and adhesion, vapour pressure over curved surface. Temperature dependence of surface tension.

### 3. Detailed Syllabus

#### (B) Second Term

From ..... 2021 To ..... 2022

Colloids  $\Rightarrow$  Lyophilic and lyophobic sols; coagulation and Schutff-Hardy rule; Zeta potential and Stern double layer; Tyndall effect, Electrokinetic phenomena. Determination of Avogadro number by Perrin's method; Stability of colloids and Zeta potential; Micelle formation.

[C-14 P]

Exp 1:  $\Rightarrow$  Determination of Surface tension of a liquid using stalagmometer.

Exp 2:  $\Rightarrow$  Determination of CMC from Surface tension measurements.

SFM-11 [GF-2T]

Solids  $\Rightarrow$  Forms of solids; crystal systems, Unit cells, Bravais lattice types; Symmetry elements; Law of crystallography, Miller indices of diffn planes and interplanar distance; Bragg's law, Str<sup>n</sup> of NaCl, KCl and CsCl, Defects in crystals; Cleavage and cleavage crystals.

Chemical kinetics  $\Rightarrow$  Introduction of rate law, Order and molecularity; Extent of reaction; First, second and nth order reactions.

Pseudo first order reactions; order of a reaction by half-life and differential method, opposing reactions; consecutive reactions and parallel reactions, Temperature dependence of rate constant; Arrhenius equation, collision theory; Lindemann theory of unimolecular reaction; outline of T-ST.

SFM-11 [GF-3T]

Chemical equilibrium: degree of advancement; variation of free energy with degree of advancement; Equilibrium constant, Gibbs free energy, KP, KC and K<sub>x</sub> relation, van't Hoff's reaction isotherm; isobar and isochore from diffn standard states; Le Chatelier's principle.

Ionic Equilibria  $\Rightarrow$  Strong, moderate and weak electrolytes, degree of ionization, ionization constant and ionic pdt of water, pH scale, common ion effect. Salt hydrolysis; Buffer solutions; Solubility pdt, applications of solubility pdt principle.

[SF MIV  $\Rightarrow$  GE - AT]

Colligative properties  $\Rightarrow$  Vapour pressure of soln<sup>n</sup>, Raoult's law, Thermodynamic derivation using chemical potential to derive relations between the four colligative properties i. relative lowering of vapour pressure (ii) elevation of boiling point (iii) depression of freezing point (iv) osmotic pressure

Phase rule  $\Rightarrow$  component and degree of freedom, phase rule, phase diagram of water,  $\text{CO}_2$ , sulphur. Clausius-Clapeyron equation. Azeotropic solution, Henry's law.

B.Sc - 1st year  $\Rightarrow$

Section I  $\Rightarrow$  Extraneous structure of atoms: Bohr's theory, hydrogen spectrum, Hund's rule, electronic configuration, Aufbau principle, s, p, and d orbitals.

Radioactivity  $\Rightarrow$  Natural radioactivity units, law of radioactive, half-life and average life of radio elements, stability, m/p ratio, nuclear binding energy, fission, fusion, artificial radioactivity,

Chemical Periodicity  $\Rightarrow$  electronic configuration, s, p, d, f block elements, ionization potential, electron affinity, and electronegativity, periodic and group-wise variation of above properties, Diagonal relationship, atomic radii, electronegativity.

Chemical bonding  $\Rightarrow$  (i) ionic bonding,

(ii) covalent bonding.

Co-ordinate bonds and co-ordination compounds.

[B.VOC - 2nd year]

(i) Gaseous state of matter  $\Rightarrow$  Gas law, average kinetic energy, Boltzmann constant, Maxwell's distribution, mean free path, collision frequencies, real gases, compressibility factor.

### 3. Detailed Syllabus

(C) Third Term

From ..... 2021 To ..... 2022

2. Liquid state : vapour pressure, surface tension, viscosity.

3. Thermodynamics :> The first law, reversible and irreversible work. concepts of internal energy, enthalpy, isothermal and adiabatic expansion. Criteria of a perfect gas, the second law, Carnot's cycle, Joule-Thomson effect.

4. Dilute Solutions :> The colligative properties, lowering of vapour pressure, elevation of boiling point, depression of freezing point, van't Hoff factor.

5. Dilute Solutions :> The colligative properties, lowering of vapour pressure, elevation of boiling point, depression of freezing point. Abnormal behavior, van't Hoff factor.

6. Catalysis :> catalyzed reactions, Elementary idea of absorption, autocatalysis, catalytic poisons, promoters, enzyme catalysis.

7. Electrochemistry :> Arrhenius theory, Equivalent and molecular conductivity, Kohlrausch's law, conductometric titration.

8. Colloidal State :> Different type of colloids, method of preparation of lyophobic colloids, Gold number, isolectric point, Tyndall effect.

[B.Sc.-Practical]

(i) Inorganic qualitative analysis.

(ii) Basic radicals

(iii) Acid radicals

(iv) Inorganic quantitative analysis

(v) Qualitative analysis of single organic compound.

(vi) Organic Preparation.

[B.voc - 3<sup>rd</sup> year]

Applied chemistry: chemical reformation processes,  
manufacturing of some important industrial  
products. Amino acids, peptides and proteins. Nucleic acid,  
Drug. Synthesis of dye and V.P.E., pesticides, food additives  
Hydrogenation of oil, Erosion analysis.

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
09.07.2021		
to 10.07.2021	Explain chemical potential of anion in solution with equation and example. Activity and activity co-efficients of ions in solution with derivation and some problems and Debye-Hückel limiting law - brief qualitative description of the postulates involved.	2 periods
	Explain Electromagnetic media. with characteristics, Lambert-Beer's law with equation and give some mathematical problems:	3 periods
	Introduction rate law; orders and molecularity with Example and definition.	2 periods
	Refractive pressure of sol <sup>m</sup> and Raoult's law.	1 period
Date	Home task for the week	
05.07.2021	Give some mathematical problem in Debye-Hückel - limiting law and some question of Lambert-Beer's law and solve some mathematical problem in orders and molecularity calculation.	

## IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
<u>SFM - IV</u> Electrical pno- tency of mole- celis.	Give some notes on chemical-potential or Debye-Hückel limiting law, and give some mathematical problem on this topic. Students solve the problem and understand the topic clearly.	Zoonan 10.7.21 Principal Meghara Gyanadarshak Mahavidyalaya
<u>(SEM - VI)</u> Photochemistry	Give some notes on the topic electromagnetic radiation and Lambert-Beer's law, and give some mathematical problem on that topic. Students solved the problem and some problem on the Lambert-Beer's law repeat the topic again.	Zoonan 10.7.21 Principal Meghara Gyanadarshak Mahavidyalaya
<u>GE - II</u> chemical kine- tics]	Students clearly understand the topic and solve the mathematical problem.	
<u>GE - IV</u> colligative property	Give some notes on Raoult's law and give some mathematical problem on the topic. Student respond positively.	Zoonan 10.7.21 Principal Meghara Gyanadarshak Mahavidyalaya

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
31.07.2021	vibration frequency of solution, to ideal solutions, ideally diluted	
17.07.2021	Solutions and colligative properties, Raoult's law and some mathematical problem about vibration frequency of solution.	3 periods
	Physical significance of absorption co-efficiency, laws of photochemistry; and Stark-Einstein law of photochemical equivalence.	2 periods
	Extent of reaction, rate constants; Rates of 1st order and some mathematical problem on the rate law.	2 periods
	Elevation of boiling point and some math on that topic.	1 periods
Date	Home task for the week	
13.07.2021	Give some mathematical problem on Raoult's law and photochemical equivalence, and give some question on that topic.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM - IV (consecutive property)	Gives some notes on Raoult's law and some mathematical problem solved by the students. Students have some problem in mathematical question related to the topic again.	Session Principal 17-2-21 Mangala Gangadhar Mahavidyalaya 7 periods
SEM - V	Give some notes on laws of photochemistry, photoisomerizing and photochemical equivalence, students clearly understand the topic.	Session Principal 17-2-21 Mangala Gangadhar Mahavidyalaya 8 periods
GE - II	Give some notes on rate law chemical kinetics and some question and answer give the detail to the topic, students give good response on this topic.	Session Principal 17-2-21 Mangala Gangadhar Mahavidyalaya
GE - IV	Give notes on elevation boiling point and some mathematical problem give the students, students solve the problem and students understand the topic clearly.	Session Principal 17-2-21 Mangala Gangadhar Mahavidyalaya

**IV. DIARY**

Date week ending	FORECAST	Amount Taught
18/07/2021	thermodynamic derivation using chemical potential to derive colligative relations in relative lowering of vapour pressure and give some mathematical problem.	10 1 period
21/07/2021	quantum yield and actinometry Examples of low and high quantum yields and give some mathematical problem on that topic.	relating 3 periods
	2 <sup>nd</sup> and n <sup>th</sup> order reactions and their differential and integrated forms, with derivation.	and their differential and integrated forms, with derivation. 2 periods
	Depression of freezing point application in calculating molecular masses.	1 period
Date	Home task for the week	
20/07/2021	Give some mathematical problem on vapour pressure and quantum yields and some questions give the students to solve them.	

**IV. DIARY**

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SFM-IV		
colligative properties	Give notes on vapour pressure and Students respond very good. Student R understood the topic clearly.	Scorred Principal 24/7/21 Materias Ganga-Subha Malaria, Jaya
SFM-VI	Give notes on quantum yield photochemistry and actinometry, Students solve some problem on quantum yield.	repeat the topic again Scorred Principal 24/7/21 Materias Ganga-Subha Malaria, Jaya
CSE-11	Give notes on 2 <sup>nd</sup> and 3 <sup>n</sup> order reactions and Students solve the mathematical problem on that topic. Students understand the topic very good.	
CSE-N		
colligative properties	Give notes on freezing point and Students solved the mathematical problem on that topic and answer the question	Scorred Principal 24/7/21 Materias Ganga-Subha Malaria, Jaya

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
25-07-2021	Definitions of phase, component to and degree of freedom, Raoult's rule	
31-07-2021	and its derivations. Definition of phase diagram with plot and explanation.	2 periods
	Photochemical equilibrium and the differential rate of photo- chemical reactions. Photosta- tionary state with derivation.	3 periods
	Osmotic pressure and amount of solute, dissociated and associated solutes in solution, abnormal colligative property.	3 periods
	Pseudo first order reactions, Determination of order of a reaction by half-life and differential method.	2 periods
Date	Home task for the week	
27-07-2021	Give one question and problem on, Raoult's rule, Photostationary state, Osmotic pressure and order of a reaction.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-IV [colligative property]	Gives notes on Raoult's rule and degree of freedom and give some problem and solution in this topic. Students do not understand degree of freedom very good; so repeat this topic again.	<i>Semester 3-1-2021</i> Principal Mangala Gangadhar Mahavidyalaya
SEM-VI [photochemical equilibrium and photostationary state]	Gives notes on photochemical equilibrium and photostationary state and give some problem and answer in this topic, student response is very good.	<i>Semester 3-1-2021</i> Principal Mangala Gangadhar Mahavidyalaya
GE-11 chemical kinetics	Gives notes on pseudo first order reaction and order and half-life of reaction and give some problem and solution in this topic, students have some problem in half- life of a reaction so repeat this topic again.	
GE-IV colligative property	Gives notes on osmotic pressure and abnormal colligative property, student response respect to this topic very good.	<i>Semester 3-1-2021</i> Principal Mangala Gangadhar Mahavidyalaya

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
01.08.2021	First order phase transition	
01.08.2021	And capillary equation derivation	
01.08.2021	and VLE Liquid-vapour equilibrium for two component system and Raoult's law	3 periods
	System with derivation and problem	
	Definition of phase, component and degrees of freedom and phase rule with example.	2 periods
	Opposing reaction and consecutive reactions with derivation	2 periods
Date	Home task for the week	
03.08.2021	Give some question and problem in phase transition and phase rule and opposing reaction & consecutive reactions.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SFM - IV		
colligative property	Given note on phase transition and capillary equation.	
	Liquid-vapour equilibrium for two components and give some problem and solution. Students response very good but have some problem on phase transition so repeat the topic again.	Principal 7/8/21 Mangala Gangadhar Mahanty alias
SEMESTER		
CPE - II [Chemical kinetics]	Given note on opposing reaction and consecutive reactions and give some problem and answer. Students response very good.	Principal 7/8/21 Mangala Gangadhar Mahanty alias
GE - IV		
colligative property	Given note on phase, component and degree of freedom with example. Student response very good but some problem in component, so repeat the topic again.	Principal 7/8/21 Mangala Gangadhar Mahanty alias
Phenomena		

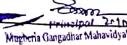




#### IV. DIARY

Date week ending	FORECAST	Amount Taught
26.09.2021 to 02.10.2021	Space lattice, unit cell, crystal planes with definition and picture.	2 periods
	Thermodynamic conditions for equilibrium - degree of advancement vs reaction mechanism with derivation.	2 periods
	Thermodynamic conditions for equilibrium, degree of advancement, variation of free energy change with degree of advancement.	2 periods
Date	Home task for the week	
26.09.2021	Give some question and problem on unit cell, crystal planes, equilibrium, vs reaction mechanism and free energy change.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM - I		
Chemical Equilibrium	Give notes on equilibrium condition and van't hoff reaction mechanism, Students response very good.	Principal 21/09/21 Mangaladevi Gangadhar Mahavidyalaya 
SEM - V (Solid)	Give notes on space lattice, unit cell and crystal planes, Students have problem on unit cell & free topic repeat again for students.	Principal 21/09/21 Mangaladevi Gangadhar Mahavidyalaya 
QE - III	Give notes on equilibrium condition and free energy, Students give good answer in free topic. And response is very good.	Principal 21/09/21 Mangaladevi Gangadhar Mahavidyalaya 

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
02.10.2021	to Bravais lattice. packing of hard spheres. Uniform hard spheres. Derivation. Brooked arrangements types.	3 periods
02.10.2021	Vorral slope packing with derivation and problem.	
	Variation of free energy with degree of advancement. Equilibrium constant with Derivation and problem.	2 periods
	Equilibrium constant and Standard Gibbs free energy change with Derivation and problem.	2 periods

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-I		
Solid	Give notes on Bravais lattice packing of hard sphere and 1-line packing. Students response very good but some problem in packing fraction & repeat them after again.	Room Principal 15.10.21 Nagarjuna Mahadevappa
SEM-II		
Chemical equilibrium	Give notes on variation of free energy with degree of advancement and equilibrium constant. Students respond very good.	Room Principal 15.10.21 Nagarjuna Mahadevappa
GE-II	Give notes on standard Gibbs free energy. Students solve the problem very good. and answers all the question very good.	Room Principal 15.10.21 Nagarjuna Mahadevappa

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
07.11.2021	tetrahedral and octahedral voids, void space in P-type, with derivation and picture.	2-periods
13.11.2021	Gibbs free energy changes, Definitions of $K_p$ , $K_e$ and $K_x$ with derivation and problem.	1-period
	Definition of $K_p$ , $K_e$ and $K_x$ with derivation and problem.	1-period.
Date	Home task for the week	
8.11.2021	Give some question and problem on tetrahedral and octahedral void space, gibbs free energy changes and $K_p$ , $K_e$ and $K_x$ calculation.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-V [Solid]	Give notes on tetrahedral and octahedral voiding face P-type with derivation & student's response to problem very good and some problem in octahedral voids with so revised the unit again.	13.11.21 Principal 13.11.21 Mughera Gangotri Mahavidyalaya
SEM-III	Give notes on free energy, chemical change & $K_p$ , $K_e$ and $K_x$ , equilibrium. Students response very good.	13.11.21 Principal 13.11.21 Mughera Gangotri Mahavidyalaya
SEM-IV	Give notes on free energy, chemical change & $K_p$ , $K_e$ and $K_x$ , equilibrium. Students response very good.	13.11.21 Principal 13.11.21 Mughera Gangotri Mahavidyalaya

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
19.11.2021 to 20.11.2021	void space in f-type and 7-type cubic system and complex crystal plane.	2-periods
	Vant Hoff's reaction isotherm, isobar and isochore from different Standard States with derivation and formulae.	3-periods
	Study of viscosity of Unknown liquids with respect to Water.	2-periods
	Vant Hoff's reaction isotherm, isobar and isochore from different Standard States with derivation and formulae	2-periods
Date	Home task for the week	
16.11.2021	Give some equation and problem on F-type and 7-type cubic system, Vant Hoff's reaction isotherm, isobar and isochore,	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SFM -IV (Solid)	Give notes on F-type and 7-type cubic system, crystal plane, & student's active too question very good but some problem in crystal plane to reflect the topic again.	<i>Zamani</i> Principal 20/11/21 Materis Cognitio Materikayat
SFM -III (Chemical)	Give notes on vant Hoff's reaction isotherm, isobar and isochore. Student's active the question very good and student's my power in van Hoff's	<i>Zamani</i> Principal 20/11/21 Materis Cognitio Materikayat
SFM -III (Practical)	Students understand the practical but result is not very good in reflect the practical again	<i>Zamani</i> Principal 20/11/21 Materis Cognitio Materikayat
SFM -III (Chemical eqn)	Give notes on vant Hoff's reaction isotherm, student's my power in very good.	<i>Zamani</i> Principal 20/11/21 Materis Cognitio Materikayat

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
26.11.2021	crystal planes explain and to determine between consecutive planes cubic system explain with fixture.	2-periods
27.11.2021	Shifting of equilibrium due to change in external parameter like temperature and pressure with derivation and explanation.	3-periods
	Study of viscosity of unknown liquid with respect to water.	1 period
	concept of frequency and temperature, collision theory molecular, collision diameter, collision number and mean free path with explanation and derivation	2-periods
Date	Home task for the week	
23.11.2021	Give some question and problem on crystal planes, shifting of eqm, collision theory and collision number.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM - V (Solid.)	Give notes on crystal planes, and consecutive planes. Students response very good.	<i>Sonam</i> Principal 27.11.21 Mugdha Gangadhar Mahavir Sirs
SEM - III (Chemical eqm)	Give notes on shifting of eqm due to change in external parameter, temp and pressure. Students problem in shifting of eqm so repeat the topic.	<i>Sonam</i> Principal 27.11.21 Mugdha Gangadhar Mahavir Sirs
SEM - IV	Students understand the practical. Answer is correct	
SEM - I (Gas.)	Give notes on concept of frequency and temperature and collision theory. Students response is very good.	<i>Sonam</i> Principal 27.11.21 Mugdha Gangadhar Mahavir Sirs

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
28.11.2021	Ordering of planes, Miller indices, Calculation of d-spaces with derivation and explanation.	2 periods
04.12.2021	Shifting of equilibrium due to change in pressure, Variation of eqm with addition of inert gas.	2 periods
	Determination of partition co-efficient for the distribution of $I_2$ between water and kely.	2 periods
	Frequency of binary collisions between and different molecules, wall collision and role of effusion	2 periods
	Shifting of eqm due to changing parameter.	1 period.
Date	Home task for the week	
29.11.2021	Give home question and problem on miller indices, calculating d-spaces, equilibrium shift & collision theory.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-V (Solid)	Give notes on ordering of planes, Miller indices and calculation of d-spaces. Students response very good but some problem on miller indices repeat the topic.	Session 4/12/21 Principal M. Mukundan
SEM-III (Chemical Equilibrium)	Give notes on shifting of eqm in presence and inert gas. Students response very good.	
SEM-IV (practical)	Students response is very good and practical answers are correct.	Session 4/12/21 Principal Gangadhar Mahadevayya
QE-III (Chemical eqm)	Give notes on shifting of eqm due to inert gas & d-spaces. Response is very good.	
SEM-I (gas)	Give notes on frequency of binary collisions, similar and different molecules, students understand the topic is very good.	Session 4/12/21 Principal Gangadhar Mahadevayya

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
05-12-2021		
to 11-12-2021	Relation between molar mass and unit cell dimension for cubic system. Braggs law derivation with derivation and explanation.	2-periods
	Le Chatelier's principle and its derivation.	2-periods
	Determination of partition co-efficient for the distribution of $I_2$ between water and oil.	2-periods
	Le Chatelier's principle and its derivation.	2-periods
	Nature of distribution of valency, molar mass distribution of species in one, two and three dimensions.	2-periods.
Date	Home task for the week	
05-12-2021	Give brief on molar mass and unit cell dimension for cubic system, Le Chatelier's principle and nature of distribution of valency.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or Head
SFM - V (Solid)	Give notes on relation between molar mass and unit cell dimension for cubic system. Braggs law student's answer is very good.	Principals Molecular Model
SEM - III (Chemical Equilibrium)	Give notes on Le Chatelier's principle Student's response is very good.	
SEM - III (practical)	Student's practical very well and answer is correct.	Principals Molecular Model
SFM - III AT - III	Give notes on Le Chatelier's principle Student's response is very good!	
SEM - I (Gas)	Student response is very good. Give notes on nature of distribution of valency, Maxwell's distribution of speed. One law and three dimensions.	Principals Molecular Model

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
18.10.2021	to determination of crystal structure, powder method, structure of metal and ionic crystals with explanation and derivation.	
18.10.2021	calculation of degree, root mean square and most probable value in each case with deviation and problem.	2 periods
	Normal distribution law; Application - finding out Ksp using Henry's law for KNO <sub>3</sub> , K <sub>sp</sub> and dimensional analysis	2 periods
	Normal distribution law with derivations.	1 period.
Date	Home task for the week	
13.10.2021	Give question and problem on crystal structure, powder method, root mean square and normal's distribution law.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-V (Solid)	Give notes on determination of crystal structure, powder method, structure of metal and ionic crystals with explanation and derivation. Students response very good but know problem in powder method repeat the topic again.	Session Principal 18/10/21 Mangala Gangadhar Mahavir Jay.
SEM-I (Gas)	Give notes on average, root mean square and most probable velocity students answer all the questions and response is very good.	
SEM-III Chemical Equilibrium	Give notes on normal's distribution law. Students response is very good.	Session Principal 18/10/21 Mangala Gangadhar Mahavir Jay.
QE-II	Give notes on normal's distribution law. Students response is very good.	Session Principal 18/10/21 Mangala Gangadhar Mahavir Jay.

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
19.12.2021	Classification of polymers nomenclature with IUPAC nomenclature in standard form and application in standard form.	2 periods
25.12.2021	Polymer and virial equation derivation form of gases from ideal behavior Arrhenius compressibility factor with derivation and application	2 periods
	Chemical potential and activity partial molar quantities with derivation and problem	2 periods
	Determination of $K_{eq}$ for $K_{eq} = K_T$	2 periods
	Chemical potential and activity partial molar quantities with derivation and problem	1 period
Date	Home task for the week	
21.12.2021	Give question and problem on polymers, virial equation, ideal behavior, and equilibrium constant.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
S.F.M - V (Physics)	Give notes on classification of polymers and nomenclature of polymer and application of ideal gas equation very good.	Section Principal Mugheria Gangadhar Malavchidaya
S.F.M - I (Physics)	Give notes on real gas and ideal gas equation, derivation of gases from ideal behavior, students answer very good but some problem in virial equation so repeat structure language	Section Principal Mugheria Gangadhar Malavchidaya
S.F.M - II (chemistry) (partial potential)	Give notes on chemical potential and activity partial molar quantities Students response very good.	
S.F.M - II (practical)	Students practical done very good and response is very well.	
G.E - II	Give notes on chemical potential and activity, partial molar quantities Students response very good.	Section Principal Mugheria Gangadhar Malavchidaya

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
02.01.2022	Molecular forces and chemical bonding in polymeric substances	2 periods
03.01.2022	Discuss structure of polymers in comparison with example of proteins in terms of effect on their solubility (H <sub>2</sub> O)	
04.01.2022	Andrews and Arragard's plots, van der waals equation and its framework, ill. decaration and application in explaining real gas behaviour.	3 periods
05.01.2022	Thermodynamic parameters of mixing with derivation and mathematical problem	2 periods
06.01.2022	Strong, moderate and weak electrolytes, degree of ionization.	2 periods
Date	Home task for the week	
09.01.2022	Give some question and problem on molecular forces in polymers, van der waals equation and degree of ionization.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
S E M - I (Chem)	Give notes on molecular forces and chemical bonding in polymers & structure of polymers. Students response is very good.	
S E M - I. (Chem)	Andrews and Arragard's plots note given to the students, student's response is very good.	
S E M - II (Chemical potential)	Gives notes on thermodynamic parameters of mixing with derivation, it is fully resp. by students, very good but some parts seem to be energy related topics are not clear.	Principal Mugheria Gangadhar Mahavidyalaya
S E - III	Give notes on strong, moderate and weak electrolytes, students response is very good.	Principal Mugheria Gangadhar Mahavidyalaya

## IV. DIARY

Date week ending	FORECAST	Amount Taught
19.01.2022	Relationship between functionality, extent of reaction and degree of polymerization with example and definition.	2 periods
15.01.2022	Relation between chemical potential and gibbs free energy and other thermochemical state with derivation and explanation.	2 periods
	Other equation of state, Raoult's law and Raoult's law with derivation and example.	2 periods
	Degree of ionization, factors affecting degree of ionization.	1 period.
Date	Home task for the week	
13.01.2022	Give question and problem on degree of polymerization, gibbs free energy, Raoult's law and degree of ionization.	

## IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SFM-V (Polymers)	Give note on relationships between functionality and degree of polymerization. Students response is very good.	Excellent Principal Mukherjee Gangadhar Mahavidyalaya
SFM-III Chemical equilibrium	Give notes on chemical potential and gibbs free energy. Students solve all question and their response is very good.	
SFM-I (Gas)	Give notes on equation of state and Raoult's law derivation and Raoult's law is very good but some problem on Raoult's law eqn. SFM topic repeated again.	Excellent Principal Mukherjee Gangadhar Mahavidyalaya
IGCSE (II)	Give notes on degree of ionization. Student's response is very good.	

## IV. DIARY

Date week ending	FORECAST	Amount Taught
16.01.2022	to introduction of rate law, Extent of reaction, rate constants, order of first order reaction with derivation and problem.	2 periods
22.01.2022	Variation of thermodynamic function for systems with variable composition, equation of state with derivation and problem.	2 periods
	Determination of partition coefficient for the distribution of partition distribution.	2 periods
	Solubility and solubility pdt.	1 period.
Date	Home task for the week	
16.01.2022	Give some question and problem on rate constant, order of first order, thermodynamic function, polarity product.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
<u>SEM-I</u> <u>(Chemical kinetics)</u>	<p>Give notes on rate law, extent of reaction, rate constant of first order reaction. Students response is very good but have some problem on rate law repeat this topic again</p>	<u>Sonam</u> Principal Mugheria Gangadhar Mahavidyalaya
<u>SEM-III</u> <u>Chemical potential.</u>	<p>Give notes on variation of thermodynamic function for system with variable composition. Students response is very good.</p>	
<u>SEM-III</u> <u>Practical</u>	<p>Students response is very good and practical result is correct.</p>	<u>Sonam</u> Principal Mugheria Gangadhar Mahavidyalaya
<u>SEM-III</u> <u>GF-III</u>	<p>Give notes on Solubility and solubility plt. Students response is very good.</p>	<u>Sonam</u> Principal 22.05.22 Mugheria Gangadhar Mahavidyalaya

## IV. DIARY

### IV. DIARY

Date week ending	FORECAST	Amount Taught	Class and Subject	Note and observation by the teacher	Remarks by Principal or HOD
29.01.2022	Pearls first order reaction Example using end catalysis	2 periods	Sr m-7 Chemical kinetics	Give notes on pseudo first order reaction using multiple methods.	Session 29-1-22 Principal & Headmaster
29.01.2022	Test and analysis of mettalic acetate with dissociation and problem.	2 periods	Sr m-7 Chemical kinetics	Students perform in very good.	Session 29-1-22 Principal & Headmaster
29.01.2022	Buffer Solution, solubility product of sparingly soluble salts.	2 periods	Sr m-11 Chemical kinetics	Give notes on buffer solution and solubility product of sparingly soluble salts. Sr m-11	Session 29-1-22 Principal & Headmaster
29.01.2022	Chemical potential of an ideal gas in an ideal gas mixture with densities and fractions.	2 periods	Sr m-11 Chemical kinetics	Response is very good but have some problem in soluble part in respect to the topic again.	Session 29-1-22 Principal & Headmaster
29.01.2022	Study of viscosity of liquids.	1 period.	Sr m-11 (Practical)	Give notes on usage of viscometer.	Session 29-1-22 Principal & Headmaster
29.01.2022	Date Home task for the week				
29.01.2022	Give some question and answers on chemical potential of an ideal gas mixture.				
29.01.2022	first order reaction, Buffer solution, solubility product and chemical potential.				

## IV. DIARY

Date:

Signature of  
the Invigilator



Date week ending	FORECAST	Amount Taught
28/01/2022		
14/02/2022		
21/02/2022		
01/03/2022		

## IV. DIARY

Date:

Signature of  
the Invigilator

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
Sem-I (Chemical kinetics)	Civil rules on Manufacture of Date contracts making question. Students answer was good.	
	but some confusion in Date contract definition. Refined, it is taught again.	

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
05.02.2022		
10.02.2022	Homogeneous catalysis with reference to acid-base catalysis. primary kinetic salt effect, with derivation and problem solution.	2 periods.
Date	Home task for the week	
08.02.2022	give some question and problem on. Homogeneous catalysis , primary kinetic salt effect.	

#### IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SFM-7 Chemical kinetics	<p>give notes on Homogeneous catalysis with reference to acid base catalysis. salt effect. Student response is very good but some problem on salt effect so repeat the topic again.</p>	<p style="text-align: right;"><u>20/02/22</u>  Principal 17/2/22  Mutheria Gangadhar Malavivalavalava</p>

## IV. DIARY

Date week ending	FORECAST	Amount Taught
18.09.2022 +0	Maxwell's reclations, Gibbs-Helmholtz equation, Joule-Thomson experiment and its consequences, inversion temp. with derivative and problem	
19.09.2022		2 periods.
Date	Home task for the week	
15.09.2022	Give question and problem on Gibbs-Helmholtz equation and Joule Thomson experiment.	

## IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
<u>S E M - I</u> <u>(Chemical kinetics)</u>	<p>give notes on Maxwell relation, and Gibbs-Helmholtz equation. In next lesson.</p> <p>Experiment. Student response is very good but some problem on Gibbs-Helmholtz equation so repeat the topic again.</p>	<p><u>Bonjour</u> Principal 19.2.22 Mugberia Gangadhar Mahavidyalaya</p>

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
06.03.2022		
10	Explain electromagnetism radiation with Planck's law. Explain Lambert-Beer's law with equation and give some mathematical problem.	3 periods
12.03.2022	Explain chemical potential of anion in solution with equation and example. Activity and activity co-efficient of ion in some problem and Debye- Hückel limiting law of qualitative description.	3 periods
	Vapour pressure of soln and Raoult's law	1-period.
Date	Home task for the week	
08.03.2022	Give some mathematical problem in Debye-Hückel limiting law and some question of Lambert's - Beer's law.	

## TV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SF M-VI  (Photache- mistry)	<p>Give some notes on the topic electromagnetic radiation and Lambert-Beer law and give some mathematical problem on that topic. Students solved the problem and some question came between the students in that topic.</p>	<p><i>Excellent</i> Principal Mugberia Gangadhar Mahavidyalaya</p>
SBM-IV	<p>Give some notes on chemical potential; Debye-Hückel limiting law and give some mathematical problem on this topic. Students solve the problem and understand the topic clearly.</p>	<p><i>Excellent</i> Principal Mugberia Gangadhar Mahavidyalaya</p>
GE-IV	<p>Give some notes on Raoult's law and give some mathematical problem on the topic. Students respond positively.</p>	<p><i>Excellent</i> Principal Mugberia Gangadhar Mahavidyalaya 12-3-22</p>

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
13.03.2022 to 14.03.2022	vapour pressure of solution ideal solutions, ideally diluted solutions and colligative property explain with derivation and derivation	2 periods
	Physical significance of absorption coefficient explain with derivation and problem.	1 period
	Determination of cmc from surface tension measurements.	2 periods
	potentiometric titration of sodium salt.	2 periods
	elevation of boiling point with derivation.	1 period.
Date	Home task for the week	
19.03.2022	give question and problem on colligative property, absorption coefficient. and elevation of boiling point.	

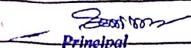
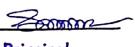
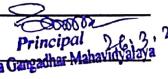
# TV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM - VI (phototronics) (my)	Give notes on physical significance of absorption & e-fiffient, Student Under- stand the topic very good.	Session Principal Mugberia Gangadhar Mahavidyalaya
SEM - IV coligative property.	Give notes on vapour pressure of solution, ideal solution? Student response vary good.	
SEM VI practical	Practical done by student very good but answers is some error so repeat the practical again.	Session Principal Mugberia Gangadhar Mahavidyalaya
SEM - IV practical.	Practical done by the student is very good answers is correct response the topic very good.	
GB - IV	Student response is very good and give some notes on elevation of boiling point.	Session Principal Mugberia Gangadhar Mahavidyalaya 19.3.22

## IV. DIARY

Date week ending	FORECAST	Amount Taught
20.03.2017 to	Thermodynamic derivation using chemical potential	
26.03.2017	to derive relation between the relative lowering of vapour pressure with derivation.	2-periods
	Study of phenol water phase diagram	2-periods
	determination of surface tension	2-periods
	Laws of photochemistry with derivation.	2-periods
	relative lowering of vapour pressure.	1-period.
Date	Home task for the week	
21.03.2017	Give some question on	
21.03.2017	relative lowering of vapour pressure and laws of photochemistry.	

## IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM - V Physical chemistry	Give notes on laws of physical chemistry. Students' response is very good.	 Principal Mugberia Gangadhar Mahavidyalaya
SEM - VI (practical)	Practical done by the students very good.	
SEM - V Practical	Give notes on relative lowering of vapour pressure, but some problem on this topic so repeat the topic again.	 Principal Mugberia Gangadhar Mahavidyalaya
SEM - IV Practical	Practical is done by the students very good.	
GE - IV.	Give notes on relative lowering of vapour pressure. Student understand the topic very carefully.	 Principal Mugberia Gangadhar Mahavidyalaya Date: 3. 2. 2008

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
03.01.2022		
to 09.01.2022	Stark-Condon principle and law of photochemical equivalence quantum yield, actinometer with derivation and problem.	2 periods
	Determination of surface-tension of a liquid.	2 periods
	Applications in calculating molar masses of normal, diluted, dissociated and associated solutions in solution.	2 periods
	Potentiometric titration of molar salt	2 periods
	concept of pressure and tendency of gas molecule.	1 period
	Depression of freezing point.	1 period.
Date	Home task for the week	
05.04.2022	Give some question and problem on photochemical equivalence abnormal colligative property collusion of gas molecule and Depression of freezing point.	

## IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-VI Photochemistry	<p>Give notes on Stark-ondon principle and law of photo-chemical equivalence quantum yield. Student response is very good.</p>	<i>Sonam</i> Principal Magadh Ganganagar Mahavidyalaya
SEM-VI practical.	<p>Practical done by the students very good and answers are correct.</p>	
SEM-IV	<p>Give notes on applications in calculating molar masses of normal, dissociated and associated solutes in solution, student response is very good.</p>	<i>Sonam</i> Principal Magadh Ganganagar Mahavidyalaya
SEM-IV practical	<p>practical done by the students very good and answers are correct.</p>	
GF-IV negative property	<p>Give notes on depression of freezing point and Student response is very good.</p>	<i>Sonam</i> Principal 9-4-22 Magadh Ganganagar Mahavidyalaya
GF-II	<p>Students clearly understand the topic.</p>	

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
10.04.2022 to	Examples of low and high quantum yields with examples and derivation.	
16.04.2022	Definitions of phase, component and degree of freedom with example.	1-period
	Abnormal colligative property with example.	1-period
	frequency of binary collisions, Rate of effusion with derivation.	1-period.
Date	Home task for the week	
11.04.2022	Give question and problem on high quantum yields per, component, degree of freedom and rate of effusion.	

## IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
(S.M.-VI) photokinetics	<p>Give notes on low and high quantum yields. No student have some problem on quantum yield concept. So repeat the topic again.</p>	 Principal Mugheria Gangadhar Mahavidyalaya
(S.M.-IV) (Propane)	<p>Give notes on phase, conformation and degree of freedom. Student response is very good.</p>	
(G.E-11) (Gas)	<p>Give notes on frequency of binary collisions, rate of effusion. Student response is very good but some problem in this topic. So repeat the topic again.</p>	 Principal Mugheria Gangadhar Mahavidyalaya
(G.E-1v) colligative property	<p>Student response is very good, give note on binary collisions.</p>	 Principal 16/4/22 Mugheria Gangadhar Mahavidyalaya

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
17.01.2022		
10	Give notes on phasechemical equilibrium and differential rate of phasechemical reaction, phasestationary & faste.	2-periods
23.01.2022		
10	Fifth order phase transition and clayey non equation, derivation and use.	2-periods
30.01.2022	Study of benzol-water phase diagram.	2-periods
30.01.2022	Study of cmc by surface tension.	2-periods
30.01.2022	osmotic pressure calculation with problem	1-period
30.01.2022	Andrew's and Amagat's plot	1-period
Date	Home task for the week	
18-29.01.2022	Give question and problems on phasechemical equilibrium, phasestationary state, clayey non equation, osmotic pressure and Amagat's plot	

# TV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SFM - VI photocatalysis	Give notes on photocatalical equilibrium and differential rate of photocatalical reaction. Student response is very good.	<i>S. Soni</i> Principal Mugheria Gangadhar Mahavidyalaya
SFM - IV (photo rule)	Give notes on first order photo transition and electro-lytic separation, student response is very good, but some problem on photo transition repeat it for topic again.	<i>S. Soni</i> Principal Mugheria Gangadhar Mahavidyalaya
SFM - V (practical)	Students done the practical very good and response is very good.	
SFM - IV practical	practical done by the student but answer is some error. So repeat the practical again.	
GE - II (gas)	Give notes on Boyle's and Amagat's problem, student response is very good.	<i>S. Soni</i> Principal Mugheria Gangadhar Mahavidyalaya
GE - IV colligative property.	give notes on osmotic pressure, Student response is very good.	

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
21.04.2021		
→	Dimerization of anthracene, photo sensitized reactions, quenching, role of photo- chemical reactions with derivation and problem.	2-periods
30.04.2021	Ideal solution at fixed temp and pressure, principle of fractional distillation process with derivation and example.	2-periods
	phase diagram of co <sub>2</sub> ,	1-periods
	Introduction of rate law, order and molecularity. Extent of reaction.	2-periods.
Date	Home task for the week	
25.04.2021	Give derivation and problem on dimerisation of anthra- cene, photo sensitized reactions, distillation pro- cess and molecularity.	

## IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-VI Physical Chemistry Inorganic	<p>Give notes on dimerization of anthracene reactions.</p> <p>Quenching and role of photochemical reactions.</p> <p>Student response is very good.</p>	<p style="text-align: right;">Session Principal Mugheria Gangadhar Mahavidyalaya</p>
SEM-IV	<p>Give notes on ideal solution at fixed temp<sup>n</sup> and press.</p> <p>Use principle of fractional distillation.</p> <p>Student response is very good.</p>	
GE-LV	<p>Give notes on phase-diagram but student have some problem in this topic so repeat the topic again.</p>	<p style="text-align: right;">Session Principal Mugheria Gangadhar Mahavidyalaya</p>
GE-19 Chemical kinetics	<p>Give notes on rate law order and molecularity.</p> <p>Student response is very good.</p>	<p style="text-align: right;">Session Principal Mugheria Gangadhar Mahavidyalaya 30.4.22</p>

#### IV. DIARY

Date week ending	FORECAST	Amount Taught
08.05.2022		
10	Definitions of phase, component and degree of freedom, phase rule ( ) and its derivation, definition of phase diagram with plot and explanation.	2 periods
11.05.2022	Photochemical equilibrium and the difference rate of photochemical reactions, photostationary state with derivation,	2 periods
	Osmotic pressure and amount of solute, dissociated and associated solutes in solution, abnormal colligative properties.	2 periods
	Periodic first order reactions, determination of orders of a reaction by half-life and differential method.	2 periods
Date	Home task for the week	
11.05.2022	Give some question and problem on phase rule, photostationary state, osmotic pressure and order of a reaction.	

## IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SE M-IV	<p>Give some notes on chemical potential, Debye-Hückel limiting law and give some mathematical problem on this topic. Students solve the problem and understand the topic clearly.</p>	<i>Session</i> <i>Principal</i> <i>Mugheria Gangadhar Mahavidyalaya</i>
SE M-VF	<p>Give some notes on the topic Electromagnetic radiation and Lambert-Beer's law and give some mathematical problem on that topic. Students solved the problem and one problem on the Lambert-Beer's law repeat the topic again.</p>	<i>Session</i> <i>Principal</i> <i>Mugheria Gangadhar Mahavidyalaya</i>
G.E-II	<p>Students clearly understand the topic and solve the mathematical problem.</p>	
GP-IV	<p>Give some notes on Raoult's law and give some mathematical problem on the topic. Student response positively.</p>	<i>Session</i> <i>Principal</i> <i>Mugheria Gangadhar Mahavidyalaya</i> 14.05.22