Mugberia Gangadhar Mahavidyalaya

Estd.-1964
NAAC Re-Accredited 'B'+ Level Govt. aided College
CPE (Under UGC XII Plan) & NCTE Approved Institutions
DBT Star College Scheme Recipient

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TEACHER'S DIARY

Department of ..... Chemistry .....

Class - Sem- I, II, III, IV, V, VI. GE- I, II. B. Voc.

Subject Chemistry

Session 2021- 2022

Teacher's Name Minakshi Maity

Time Table For Odd Semester

DAYS	1	2	3	4	5	6	7	8	9	10
Monday			SEM-3 C_6T		SES-V $C_{11}T$	SEM-V DSE	SEM-V -2P			
Tuesday			SEM-V $C_{11}T$	SEM-I GE-	SEM-I 1P (Nwt)					
Wednesday		SEM-III B-VoC	SEM-III C_6T	SEM-I GE-	SEM-I 1P (Math)					
Thursday			SEM-III DSC-1CT	SEM-V B.VoCT		SEM-III GE-3P	SEM-III GE-3P			
Friday										
Saturday										
Sunday										

SUMMARY

Class	SEM-III	SEM-V	SEM-1	
Subject	Chemistry	Chemistry	Chemistry	
No. of Periods	6	5		

Time Table For Even Semester

DAYS	1	2	3	4	5	6	7	8	9	10
Monday		SEM-VI $C_{13}T$	SEM-IV C_9T	SEM-II C_3T						
Tuesday	SEM-VI $C_{13}T$				SEM-IV C_9T	SEM-II GE	SEM-II -2P(Math)			
Wednesday		SEM-IV C_9P	SEM-IV C_9P	SEM-IV B.VoCT		SEM-II GE-	SEM-II 2P (Nwt)			
Thursday		SEM-II C_3T	SEM-II GE2T	SEM-IV C_9P	SEM-IV C_9P					
Friday										
Saturday										
Sunday										

SUMMARY

Class	SEM-II	SEM-IV	SEM-VI	
Subject	Chemistry	Chemistry	Chemistry	
No. of Periods	7	6	2	

2. A Syllabus of the Work in Outline

SEM-II

(C_3T)

⇒ Extra nuclear Structure of atom =

⇒ Chemical Periodicity ⇒

Modern IUPAC Periodic table, Effective nuclear charge, screening effects and penetration, Slater's rules, atomic radii, ionic radii, covalent radii, lathanide contraction. Ionisation potential, electron affinity and electronegativity and factors influencing these properties, group electronegativity. Group trends and periodic trends in these properties in respect of S, P, and d block elements. Secondary periodicity, Relativistic Effect, Innert pair effect.

⇒ Acid-Base Reactions : ⇒

Acid-Base concept: Arrhenius concept, theory of solvent system. Bronsted-Lowry concept, group characteristics of Lewis acid. solvent levelling and differentiating effects. Thermodynamic acidity parameter. Drago-Wayland equation. Super acids. Gas phase acidity and proton affinity. HSAB principle, Acid-base equilibria in aq. solution, pH, buffer, Acid-base neutralisation curves, indicator, choice of indicator.

⇒ Redox Reactions and precipitation Reactions : ⇒

C_3P

⇒ Acid and Base Titrations:

⇒ oxidation-reduction Titrimetric:

SEM-III

(C6T)

12

⇒ Chemical Bonding - I

(i) Ionic Bond ⇒ General characteristics, types of ions, size effect, radius ratio rule and its application and limitations. Packing of ions in crystals, Born - Lande equation with derivation and importance of Kapustinskii expression for lattice energy. Medelung constant. Born - Haber cycle and its application, Solvation energy. Defects in solids. Solubility energetics of dissolution process.

(ii) Covalent Bond ⇒ Polarizing power and polarizability, ionic potential, Fazan's rules. Lewis structure, formal charge. Valence bond Theory. The hydrogen molecule (Heitler - London), directional behaviour of covalent bonds, hybridizations. equivalent and non-equivalent hybrid orbitals, Bent's rule. Dipole-moments; VSEPR theory, Shapes of molecules and ions containing lone pairs and Bond pairs and multiple bonding.

⇒ Chemical Bonding - II

⇒ Radioactivity ⇒

C6P

⇒ Iodo-/Iodimetric Titrations

⇒ Estimation of metal content in some selective samples.

3. Detailed Syllabus

(A) First Term

From ..... **To** .....

SEM-IV

(CoT)

⇒ General principles of Metallurgy ⇒

⇒ Chemistry of s and p Block Elements ⇒

Relative stability of different oxidation states, diagonal relationship and anomalous behaviour of first member of each group. Allotropy and catenation. Study of the following compounds with emphasis on structure, bonding, preparation, properties and uses. Beryllium hydrides and halides. Boric acid and Borates, boron nitrides, borohydrides and graphitic compounds, silanes, oxides and oxoacids of nitrogen, phosphorous, sulphur, and chlorine. Peroxo acids of sulpher, sulphur-nitrogen compounds, interhalogen compounds, polyhalide ions, pseudohalogens, fluorocarbons and basic properties of halogens.

⇒ Noble Grasses :-

Occurrence and uses, rationalisation of inertness of noble gases, Clathrates, preparation and properties of XeF_2, XeF_4 and XeF_6, Nature of bonding in noble gas compounds. Xenon-oxygen compounds. Molekular shapes of noble gas compounds.

⇒ Inorganic Polymers.

⇒ Co-ordination chemistry-I

(C$_{9}$P)

⇒ Complexometric titration =

1. Zn(II)
2. Ca(II) and Mg(II) in a mixture.
3. Hardness of water.

⇒ Inorganic preparations:

1. Cis and trans $K[Cr(C_2O_4)_2(H_2O)_2]$
2. Tris-ethylene diamine nickel(II) chloride.
3. Tetraamine carbonatocobalt(III) ion
4. $Mn(acac)_3$ and $Fe(acac)_3$

:= (SEM-V) =:
(.C$_{11}$T)

⇒ Co-ordination Chemistry - II

⇒ Chemistry of d and f-block elements:

Transition elements:

General comparison of 3d, 4d and 5d elements in term of electronic configuration, oxidation state, redox properties, co-ordination chemistry.

Lanthanoids and Actinoids:

General comparison on electronic configuration, oxidation states, colour, spectral and magnetic properties, Lanthanide contraction, separation of Lanthanides.

3. Detailed Syllabus
(B) Second Term

From ..... To .....

(C11P)

⇒ Chromatography of metal ions =

⇒ Gravimetry

⇒ Spectrophotometry

SEM-VI

(C13T)

⇒ Bioinorganic Chemistry

⇒ Organometallic Chemistry ⇒

Definition and classification of organometallic compounds on the basis of bond type. Concept of hapticity of organic ligands. 18-electron and 16-electron rules. Applications of 18-electron rule to metal carbonyls, nitrosyls, cyanides. General methods of preparation of mono and binuclear carbonyls of 3d series. Structure of mono and binuclear carbonyls, pi-acceptor behaviour of C.O, synergic effect and use of IR data to explain extent of back bonding. Zeise's salt: Preparation, structure, evidence of synergic effect. Ferrocene: Preparation and reactions. Reactions of organometallic complexes: substitution, oxidative addition, reductive elemination and insertion reactions.

⇒ Catalysis by Organometallic compounds ⇒

Study of the following industrial process-
alkene hydrogenation, hydroformylation, Wacker process, Fischer Tropsch reaction and Ziegler-Natta catalysis.

⇒ Reaction kinetics and Mechanism.

(GE-1 T)

SEM-I

Inorganic chemistry-I

⇒ Atomic Structure ⇒

⇒ Chemical periodicity ⇒

⇒ Acids and Bases ⇒

⇒ Redox reactions ⇒

GE-1 (P)

Inorganic Chemistry ⇒

1. Estimation of sodium carbonate and sodium hydrogen carbonate present in a mixture.

2. Estimation of oxalic acid by titrating it with $KMnO_4$

3. Estimation of water of crystallisation in Mohr's salt by titrating with $KMnO_4$

1. Estimation of Fe(II) ions by titrating it with $K_2Cr_2O_7$ using internal indicator.

5. Estimation of Cu(II) ions iodimetrically using $Na_2S_2O_3$

3. Detailed Syllabus

(C) Third Term

From ..... **To** .....

(SEM-2)

(GE-2T)

Inorganic Chemistry - II

⇒ Chemical bonding and Molecular Structure.

Ionic bonding : General characteristics of ionic bonding, Lattice energy, Born-Haber cycle, Born-Lande equation. polarising power and polarizability, Fajan's rule, dipole moment.

Covalent Bonding : VSEPR theory and hybridisation with suitable examples of Linear, trigonal planar, square planar, tetrahedral, trigonal bi pyramidal and octahedral arrangements.

Concepts of resonance of various organic and inorganic compounds and M.O approach.

⇒ Comparative study of p-block elements.

(GE-2P)

Inorganic Chemistry Lab⇒

Quantitative semimicroanalysis of mixtures containing three radicals.

Acid Radicals : Cl^-, Br^-, I^-, NO_2^-, NO_3^-, S^{2-}, SO_4^{2-}, PO_4^{3-}, BO_3^{3-}

Basic Radicals : Na^+, K^+, Ca^{2+}, Ba^{2+}, NH_4^+, Fe^{3+}, Ni^{2+}, Cu^{2+}

B.Voc.

(Part-II)

Inorganic Chemistry ⇒

1. Comparative Study of P-block elements:

2. Acid-base concept:

Arhenius and Bronsted Lowry concept, relative strength of acid bases, Lux-Flood concept, Lewis Concept, pH, buffer. HSAB principle.

3. Redox Chemistry:

Balancing of equation by ion-electron method. Nernst equation, formal potential, disproportionation and comproportionation reaction.

4. Chemical equilibrium:

paper - III

Inorganic qualitative analysis.

Inorganic quantitative analysis.

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Introduction of organometallic Chemistry and its classification.	1P (online)
1/07/21 – 3/07/21	Introduction of group elements of s and p block and relative stability of their oxidation state.	1P (online)
	Definition of acid-base by Arrhenius theory and advantage and disadvantage of this theory	1P
o o	o o o o o o	o o
	Hapticity of organometallic compounds and introduction of 18.e rule and explanation of 18 e rule through H.O Diagram	2 lecture
5/07/21 – 10/07/21		
	Diagonal Relationship, its cause and chemical similarity between the diagonal pair.	2 lecture
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-VI	They are very interested in the class and all are present in the online class.	Principal Meghela Computer Mahavidyalaya
SEM-IV	There are few students on online class but the present students note down the oxidation states.	Principal Meghela Computer Mahavidyalaya
SEM-II	They are very curious on online class.	
o	o o o o	
SEM-VI	Students are very much excited to listen the class.	
		Principal 10.7.21 Meghela Computer Mahavidyalaya
SEM-IV	Students are very much interested in the class.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Calculation of TVE of organometallic compound and M-M with many examples.	2 lecture
12/07/21 – 17/07/21	Acid-Base definition by Solvent-system concept and its advantage and disadvantage of this theory.	2 lecture
	Anomalous behaviour of first member of group 1, 2 and 13 to 17	2 lecture
	Preparation, Properties and structure of Mono and bi nuclear organometallic compounds of 3d series	2 lecture
19/07/21 – 24/07/21	Acid-Base definition by Bronsted-Lowry concept and concept of conjugate acid-base.	2 lecture
	Allotropy and catenation.	2 lecture

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-VI	They are very much interested to do the examples given in class.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-II	They are all present in the class and listen the class obediently	
SEM-IV	They listen the class very interestingly.	
SEM-VI	They listen the class very carefully and all are present in online class.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-II	Few are absent in the class but Present student do the lesson very seriously.	
SEM-IV	All are present in the class and listen the class seriously.	24.7.21 Principal Mugberia Gangadhar Mahavidyalaya

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Synergic effect. Zeise's salt and Ferrocene.	2 lecture
26/07/21 - 31/07/21	Definition of acid-base by lewis and Lux-flood concept and advantage and disadvantage of these two concepts.	2 lecture
	Preparation, Properties, structure and uses of beryllium halides and hydrides.	2 lecture
	Group characteristics of lewis acid and Differentiating and levelling effects.	2 lecture
02/08/21 - 7/08/21		
	Preparation, properties, structure and uses of boric acid and borates.	2 lecture
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-VI	All are present and listen carefully	Principal
SEM-II	Most students are present in the class and accept the lesson very carefully.	
SEM-V	Students are very much active in the online class.	
		Principal
SEM-III	Most of the students are present in the online class and listen the class very carefully.	
SEM-IV	Students are very much interested in the online class and listen the class very carefully.	Principal

IV. DIARY

Date week ending	FORECAST	Amount Taught
09/08/21 - 14/08/21	Preparation, Properties, structure and uses of boron nitrides, boro hydrides and graphitic compounds	2 lecture
	Thermodynamic acidity parameters, Drago-Wayland equation and super acid with proper explanation and example.	2 lecture
16/08/21 - 21/08/21	Gras-phase acidity and HSAB principle and pH with mathematical calculation along with suitable examples.	2 lecture
	Preparation, properties, structure and bonding and uses of silanes, oxide and oxo acid of N, P, S and Chlorine.	3 lecture

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-IV	Most of the students are present in the online class and they note down the lectures very carefully.	Principal Jagiroad Gangadhar Mahavidyalaya
SEM-II	Students are very much active on the online class.	
SEM-II	The students note down the formula and do the problem solution on pH correctly.	Principal Jagiroad Gangadhar Mahavidyalaya
SEM-IV	They students wants thorough written notes on the topics and it also supplied.	Principal

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Buffer, its classification and Buffer action.	1 lecture
23/08/21 - 28/08/21		
	Acid-base neutralisation curves with proper example and picture and also with explanation.	1 lecture
	Indicator and choice of indicators with suitable examples.	1 lecture
	Effective nuclear charge and screening effects and penetration with proper explanation.	1 lecture
30/08/21 - 4/09/21	Slater's rule for calculation of screening constant and thereby calculation of effective nuclear charge.	2 lecture
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-II	Most of the students are present and they understand the topic very clearly.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-II	They also draw pictures in their note book and listen the class very carefully.	
SEM-II	They are very much attentive in the class.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-II	They are very much active in the class.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-II	Students do the mathematical problem correctly.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Atomic radii, ionic radii, Covalent radii and Lanthanide contraction	1 lecture
06/09/23 - 11/09/23	Ionisation potential: Definition, Changes along period and group, exception of the trend and question and answer about ionisation potential	1 lecture
	Electron affinity and electronegativity: Definition, Changes along period and group and some question and answer about it, Mathematical problem on pauling scale, Mulliken scale and Alred Rochow scale of electronegativity.	2 lecture
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-II	They are all present in the online class to take the class.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-II	They are very much interested in the online class.	
SEM-II	They all are present in the online class and take the class very seriously. They do the mathematical problem very correctly	Principal Mugberia Gangadhar Mahavidyalaya

IV. DIARY

Date week ending	FORECAST	Amount Taught
13/09/21 - 18/09/21	General introduction on d block elements and why d block elements are called transition elements.	1 lecture
	The electronic configuration of 3d block elements and their oxidation state and some question and answer about it.	1 lecture
20/09/21 - 25/09/21	Redox property of 3d block metal elements with proper explanation and co-ordination chemistry involving 3d block elements.	1 lecture
	The introduction and electronic configuration of 4d block elements and explanation of their electronic configuration.	1 lecture

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-V	They are all present in the online class and take the class very seriously.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-V	Students note down the oxidation states and they listen the class very seriously.	
SEM-V	They take the class very interestingly and note down their class notes.	Principal Mugberia Gangadhar Mahavidyalaya
	They all are present on the online class positively and they note down the oxidation states very carefully.	25-9-21 Principal Mugberia Gangadhar Mahavidyalaya

IV. DIARY

Date week ending	FORECAST	Amount Taught
27/09/21 - 02/10/21	The oxidation states of 4d block elements and explanation of their oxidation states and some question and answers about the application of their oxidation states.	1 lecture
	Redox property of 4d block elements, oxidising and reducing property explanation by respective standard redox potential and some question and answers about redox property of 4d block elements.	1 lecture

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-V	Students are very interested about the class and they note down all class notes very carefully.	Principal
SEM-V	Students are very much attentive in the class and they note down all the class notes very carefully.	Principal

IV. DIARY

Date week ending	FORECAST	Amount Taught
	General Characteristics of ionic bond and ionic compounds with example and explanation.	1 lecture
	Co-ordination chemistry of 4d block elements with explanation	1 lecture
	Definition of acid-base by Arhenius theory and examples.	1 lecture
04/10/21 - 09/10/21	Lattice energy and Born-Lande equation derivation and discussion of question and answer about lattice energy.	1 lecture
	Introduction of 5d block elements and electronic configuration of 5d block elements with proper explanation.	1 lecture
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	Students are very active on the online class.	
		Principal Mahatma Gangadhar Mahavidyalaya
SEM-V	Students are very much serious to the class.	
GE-1T	Students are very active in the class.	
SEM-III	Students take the lesson very seriously and interestingly.	Principal Mahatma Gangadhar Mahavidyalaya
SEM-V	Students are very much active on the online class and they note down the electronic configuration in their note book.	Principal

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Kapustinskii Equation for Lattice energy and hydration and Solvation energy with examples and explanation.	1 lecture
	Oxidation states of 5d block elements with explanation of their oxidation state.	1 lecture
18/10/21 – 23/10/21	Definition of acid-base by Bronsted Lowry concept and concept of conjugate acid-base.	1 lecture
	Radius-ratio rule and its application and calculation of it.	1 lecture
	Redox chemistry of 5d-block elements with proper explanation of oxidising and reducing agent.	1 lecture
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	Students take the lesson very seriously and attentively.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-V	They are very active on the online class and they note down the oxidation state in their notes.	
GE-1T	Students are very much serious on the class.	Principal 23.10.21 Mugberia Gangadhar Mahavidyalaya
SEM-III	Students take the lesson very carefully.	
SEM-V	Students are very much active on class.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Defect in ionic solid with proper explanation and examples.	1 lecture
	Co-ordination chemistry involving 5d block elements.	1 lecture
	Definition of acid-base by Lewis theory and classification of it.	1 lecture
25/10/21 - 30/10/21		
	Concept of polarisation and Fajan rule.	1 lecture
	Comparative study of oxidation state, Redox property and co-ordination chemistry for 3d transition elements with 4d transition elements.	1 lecture
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	Students are very much interested in the online class.	
SEM-V	Students takes the lesson very carefully.	Principal Meghnad Saha Institute of Technology
BrE-1T	Most of the students are present in the class and they understand the lesson very carefully.	
SEM-III	The students take the lesson very carefully.	Principal Meghnad Saha Institute of Technology
SEM-V	Students are very much active in the online class and they note down the class notes very carefully.	Principal 30/10/21 Meghnad Saha Institute of Technology

IV. DIARY

Date week ending	FORECAST	Amount Taught (online class)
	Application of Fazan's Rule and some question answer about it.	1 lecture
03/11/21 – 06/11/21	Coordination chemistry comparison between 4d and 5d elements.	1 lecture
	Hard-soft acid base principle and examples.	1 lecture
	Formation of Lewis structure and calculation of Formal charge with examples.	1 lecture
08/11/21 – 13/11/21	Comparison of oxidation states and redox properties between 4d and 5d block elements.	1 lecture
	Application of Hard-Soft acid base principle	1 lecture

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	Students are very much active on the online class.	
SEM-V	They are very serious in the online class.	Principal
SEM-1 GrE-1T	Students take the lesson very seriously.	
SEM-III	Students are very interested to calculate Formal charge.	3.11.21 Principal
SEM-V	Students are all present in the class and note down which they required.	
GrE-1T SEM-I	They are very interested for the class.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Concept of Valence Bond Theory and idea of σ and π covalent bond.	1 lecture (offline)
	Discussion of some questions and answers on 'd' block elements.	1 lecture (offline)
15/11/21 – 20/11/21	Concept of Redox reactions and calculation of oxidation state.	1 lecture (online)
	Introduction of 'f' block elements and their position and classification	1 lecture (offline)
	Limitation of V.B.T and introduction the concept and Rules for hybridisation.	1 lecture (offline)
22/11/21 – 27/11/21	Electronic configuration and oxidation states for Lanthanide elements.	1 lecture (offline)
	Rules for balancing the redox equation by oxidation state method with examples.	1 lecture (online)
Date	Home task for the week	
19/11/21	Calculate oxidation states for the following elements – NH_4^+, H_2O, H_2S, H_2SO_4, NO_3^-	
26/11/21	Blance the following redox equation $Cu + HNO_3 \rightarrow Cu(NO_3)_2 + NO_2 + H_2O$	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	They are very happy to do their class in offline mode.	
SEM-V	They are also very much happy to take the lesson on offline mode.	
GCE-1 (SEM-1)	They are much serious in the online class.	Principal
SEM-V	The students understand the lesson very carefully.	
SEM-III	Students note down the board work properly.	
SEM-V	The students carefully note down the class notes.	Principal
GCE-1 SEM-1	The students clearly understand the steps and note down it.	
SEM-1 GCE-1	Students done the home task correctly.	
SEM-1 GCE-1	Some students do this correctly and rest students want to understand again.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Classification of hybridisation with examples.	1 lecture (Offline)
29/11/21 – 09/12/21	Lanthanide contraction: Cause and consequence of it.	1 lecture (Offline)
	Balancing of many redox reactions by oxidation state method.	1 lecture (online)
	Introduction of VSEPR theory and Rules of this theory.	1 lecture (Offline)
	Explanation of rules for VSEPR theory with examples also.	1 lecture (Offline)
06/12/21 – 11/12/21	Seperation of lanthanides by ion exchange chromatography.	1 lecture (Offline)
	Rules or steps for balancing redox reactions by ion-electron method.	1 lecture (online)
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	The students are very much attentive in the class.	
SEM-V	The students clearly understand the lesson.	
SEM-I (GrE-I)	The students balance the redox reactions correctly.	Principal
SEM-III	The students are very much serious in the classroom.	
SEM-III	The students clearly understand the explanation.	
SEM-V	They are very interested to listen the class.	
GrE-I (SEM-I)	They note down the steps for balancing.	11-12-21

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Determination of the shape and structure of molecules and ions.	1 lecture (offline)
	Detailed spectroscopy of lanthanides elements, with proper exploration	1 lecture (offline)
13/12/21 – 18/12/21	Balancing of some redox reactions by ion electron method.	1 lecture (online)
	Explanation of Bent's rule with examples.	1 lecture (offline)
	Magnetic property of lanthanides and also calculation of magnetic moment	1 lecture (offline)
20/12/21 – 25/12/21	Discussion of some questions and answers on Bent's Rule	1 lecture (offline)
	Revision of redox chapter.	1 lecture (online)
	Introduction of actinides with their electronic configuration.	1 lecture (offline)
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	The students determine the shape and structure correctly.	
SEM-V	The students listen the lesson very carefully.	
GE-1 (SEM-I)	Students clearly understand the examples.	Principal Mugberia Gangadhar Mahavidyalaya
SEM-III	The students are very much attentive in the class.	
SEM-V	The students calculate the magnetic moment correctly.	
SEM-III	Students are very much interested in the class.	
GE-1	Students clear their confusion.	
SEM-V	Students note down the electronic configuration of actinides.	25.12.21 Principal Mugberia Gangadhar Mahavidyalaya

IV. DIARY

Date week ending	FORECAST	Amount Taught (online)
	Discussion of oxidation state of actinides with explanation.	1 lecture
03/01/22 - 08/01/22	Concept of dipole moments and formula of it with examples.	1 lecture
	Comparison of magnetic properties of Lanthanides with actinides.	1 lecture
	Introduction of periodic table.	1 lecture
	Revision of the chapter of 'f' block	1 lecture
	Explanation of some question on dipole moments.	1 lecture
10/01/22 - 15/01/22	Characteristics of 's', 'p', 'd' and 'f' block elements.	1 lecture
	Discussion the questions and answers on lattice energy.	1 lecture

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-V	The students clearly understand the class.	
SEM-III	Students are very active in the class.	
SEM-V	The students clearly understand the lesson.	Principal Meghalaya Competitive Mahavidyalaya
SEM-1 (CBCS)	Students are active in the class.	
SEM-V	They all are present on the class.	
SEM-III	The students clearly understand the answers of questions.	15.1.22 Principal Meghalaya Competitive Mahavidyalaya
SEM-1 UCE-1	They carefully note down the class notes.	
SEM-III	They collected some question and marks answers of questions.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Discussion of question and answer on hydration and solvation energy	1 lecture
17/01/22 - 22/01/22	Classification of elements on the basis of electronic configuration.	1 lecture
	Discussion of question and answer on radius ratio rule.	1 lecture
	Discussion of question and answer on valence bond theory.	1 lecture
	Concept of atomic radious, covalent radius and metallic radius.	1 lecture
24/01/22 - 29/01/22	Discussion of questions and answer on Fajan's Rule.	1 lecture
	Concept of vanderWaal's Radius and comparison between different radius	1 lecture
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	They are very much interested for the online class.	
SEM-I GCE-1	Students note down the class notes carefully.	
SEM-III	Students are very much interested for answering the class.	Principal Meghnad Saha Institute of Technology
SEM-III	They collect the questions and want answers from me.	
SEM-I GCE-1	Students are very attentive in the class.	
SEM-III	Students are very interested in the class.	29.07.22 Principal Meghnad Saha Institute of Technology
SEM-1 GCE-1	Students are very much attentive in the online class.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Discussion of questions and answers on hybridisation.	1 lecture (online)
31/01/22 - 05/02/22	Change of radius along period and group with explanation.	1 lecture (online)
	Discussion of questions and answers on VSEPR-theory.	1 lecture (online)
07/02/22 - 12/02/22	Ionic radius and its change along period and group.	1 lecture (offline)
	Ionisation potential in details.	1 lecture (offline)
14/02/22 - 19/02/22	Introduction of organometallic chemistry.	1 lecture (offline)
	Changes of ionisation potential along period and group with example.	1 lecture (offline)
Date	Home task for the week	

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-III	Students give the answers correctly	
SEM-I GrE-I	Students clearly understand the lesson clearly.	Principal
SEM-III	Students are very much interested about the class.	
SEM-1 (GrE-1)	Students are very much interested to do offline class.	Principal
SEM-1 (GrE-1)	Students listen the class very carefully.	
SEM-VI	Students are very much interested in new class.	19.02.22
SEM-1 OCE-1	Students are very much attentive in the class.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Classification of organometallic compound and introduce 18 e rule.	1 lecture (offline)
21/02/22 - 26/02/22	Explanation of 18 e rule on the basis of M.O diagram.	1 lecture (offline)
28/02/22 - 09/03/22	Calculation of total valence electron by 18 e rule with example.	1 lecture (offline)
	Application of 18 e rule on organometallic compounds.	1 lecture (offline)
	Discussion of question and answers on 18 e rule.	1 lecture (offline)
06/03/22 - 11/03/22	Introduction of 's' and 'p' block elements with name and position	1 lecture (offline)
	Preparation, propention, structure and bonding of Mono nuclear organometallic compounds of 3d series.	1 lecture (offline)

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-VI	Students take the class seriously.	
SEM-VI	Students are very much interested in the class.	Principal Meghela Computer Vidyalaya
SEM-VI	Students do the electron count correctly.	
SEM-VI	Students are very serious and note down the class notes.	Principal
SEM-VI	Students do all the answer correctly.	
SEM-IV	Students are very interested in the offline class.	11.03.22 Principal Meghela Computer Vidyalaya
SEM-VI	Students take this class very seriously.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Relative stability of oxidation state of S and P block elements.	1 lecture (offline)
	Complexometric estimation of Zn^{2+} by standard EDTA solution	2P (offline)
13/03/22 - 18/03/22	Preparation properties, structure of binuclear organometallic compound	1P (offline)
	Complexometric estimation of hardness of water.	2P (offline)
	Diagonal relationship in details.	1P (offline)
	Synergic effect for metal carbonyls	1P (offline)
20/03/22 - 25/03/22	Complexometric estimation of Ca^{2+} and Mg^{2+} in a mixture.	2P (offline)
	Application of synergic effect for metal carbonyl complex.	1P (offline)

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-IV	They carefully note down the class notes.	
SEM-IV	They do the practical correctly and carefully.	
SEM-VI	Students are very much active in the class.	Principal Vidyasagar College for Women
SEM-IV	Students do the practical correctly	
SEM-IV	Students listen the class attentively	
SEM-VI	Students clearly understand the class	25.3.22 Principal Vidyasagar College for Women
SEM-IV	Students do the practical class very sincerely.	
SEM-VI	Students do the class very attentively.	

IV. DIARY

Date week ending	FORECAST	Amount Taught (offline)
	Anomalous behaviour of first element of s and p block series.	1P
28/03/22 - 02/04/22	Complexometric estimation of hardness of water.	2P
	Zeise's salt : Preparation and structure and bonding.	1P
	Anomalous behaviour of first element of group 14, 15 and 16	1P
	Allotropy of group 13, 14, 15 and 16	1P
	Ferrocene : Preparation and Properties	1P
04/04/22 - 09/04/22	Catenation property in details.	1P
	Introduction of chemical Periodicity	1P
	Complexometric estimation of Ca^{2+} and Mg^{2+} in a mixture.	2P

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-IV	Students note down the class notes Carefully.	
SEM-IV	Students do the practical accurately.	
SEM-VI	Students clearly understand the class.	Principal Vaidya Gangadhar Mahavidyalaya
SEM-IV	Students clearly note down the class notes.	
SEM-IV	Students do the class very carefully.	
SEM-VI	Students listen class interestingly.	
SEM-IV	They are very serious in the class.	4/22 Principal Vaidya Gangadhar Mahavidyalaya
SEM-II	Students are attentive in the class.	
SEM-IV	Students do the practical seriously.	

IV. DIARY

Date week ending	FORECAST	Amount Taught
	Structure, preparation, properties and uses of Beryllium hydride and halides	1P
	Preparation of cis $K[Cr(C_2O_4)_2(H_2O)_2]$	2P
	Structure, preparation, properties and uses of Boric acid and borates.	1P
	Preparation of $[Ni(en)_3]Cl_2 \cdot 2H_2O$	2P
11/04/22 - 16/04/22	Effective nuclear charge and screening effect idea.	1P
	Pauling's Method for Calculation of Screening constant.	1P
	Oxidative addition reaction of organometallic compounds.	1P
	Reductive elemination reaction of organometallic compounds.	1P

Date	Home task for the week

IV. DIARY

Class and Subject	Notes and observation by the teacher	Remarks by Principal or HOD
SEM-V	Students note down the class notes clearly.	
SEM-IV	Students do the practical clearly.	
SEM-IV	Students clearly note down the class notes.	Principal Magdalene Computer Matriculation
SEM-IV	Students do the practical correctly.	
SEM-II	Students listen the class carefully.	
SEM-II	Students note down the steps and clearly understand the calculation.	Principal
SEM-VI	They clearly understand the class.	
SEM-VI	They clearly understand the class.	