

DAV CENTENARY PUBLIC SCHOOL, PASCHIM ENCLAVE, NEW DELHI-110087
2020-2021 (CHEMISTRY-043)

DATE	CHAPTERS & WEIGHTAGE OF MARKS	IMPORTANT TOPICS	REMARKS
Day-1 30.12.2020	SOLUTION	Henry Law (application and numerical) Roul't's law (Ideal and Non Ideal Solution) Roul't's Law as a special case of Henry Law, Positive and Negative Deviation, Azeotropes (Minimum and Maximum Boiling) Colligative Properties , Reverse Osmosis (example). <u>Must study class notes properly</u> 10 years solved assignment.	Study Class notes properly Special preference will be given for graphs, numericals and definations
	Example : 2.4,2.5,2.12 Intext Questions: 2.6, 2.7, 2.8, 2.9, 2.12 NCERT back exercise : 2.3, 2.6, 2.10, 2.11, 2.12, 2.14, 2.15, 2.16, 2.18, 2.20, 2.21, 2,23, 2,24, 2.25, 2.26, 2.28, 2.31, 2.33, 2.38, 2.40, 2.41		
Day-2 31.12.2020	ELECTRO CHEMISTRY	Galvanic and Electrolytic Cell, Conductivity and Molar Conductivity ,Faraday Law of Electrolysis, Kholorousch Law(application and numerical), Limiting molar conductivity, Conductance on Dilution (weak and strong electrolyte) <u>Numericals</u> based on Nerst Equation, Faradays law, realtion between E(cell) and equilibrium constant,free energy and equilibrium constant. <u>Must study class notes properly</u> 10 years solved assignment.	Study class notes properly Special preference will be given for graphs, numericals and definations
	Questions : (Classroom discussion ,Test and Homework) Intext Questions: 3.1, 3.2, 3.4, 3.6, 3.7, 3.8, 3.10, 3.12, 3.13, 3.14, 3.15 Examples: 3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 3.8, 3.9, 3.10 Text Book Question: 3.2, 3.3, 3.5, 3.7, 3.8, 3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18		
Day-3 01.01.2021	SURFACE CHEMISTRY	<u>Definition:</u> Lyophilic, Lyophobic, Electrophoresis, Adsorption, sorption, Emulsion, Peptization, Coagulation, Tyndall Effect, Brownian Movement, Zeta Potential, activity and selectivity of catalyst, dialysis <u>Difference B/w</u> Lyophilic-Lyophobic, Physical-Chemical Adsorption, Multi-Macro-Associated-Micelles colloids. Hardy-schuzule law and application questions. Adsorption Isotherm. Application of Colloids, adsorption. Cleansing action of soap, Adsorption theory of development ofCharge on Colloidal solution. <u>Must study class notes properly</u> 10 years solved assignment.	Study class notes properly
	Questions : (Classroom discussion ,Test and Homework) Last 10 years questions related to above concepts, notes and assignments		
Day-4 02.01.2021	BIOMOLECULES	Classification of Carbohydrate on basis of saccharide units, Reaction of Glucose with HI, Br ₂ water, Nitric Acid, Define: anomers, inversion of sugar, Amylose & amylopectin, Peptide Linkage, Fibrous & Globular Protein, denaturation of protein,primary structure of protein Expected product on Hydrolysis of Lactose, maltose & Sucrose, Classification of Protein, differences b/w globular and fibrous proteins, alpha helix and beta pleated proteins	Study notes properly which are sent on class watsapp group

		Vitamins: Sources and deficiency diseases, Difference b/w DNA and RNA, DNA finger printing Difference between essential and nonessential amino acids, nucleoside and nucleotide, fat soluble and water soluble vitamins, deficiency diseases caused by vitamins All text book questions, notes 10 years solved assignment.	
	CHEMICAL KINETICS	Rate of a reaction (average and instantaneous), factors affecting rates of reaction, order and molecularity of reaction, rate law and rate constant, integrated rate equation and half life (only for zero and first order reactions), integrated rate equation for gaseous phase (only for the first order reaction) Must study class notes properly 10 years solved assignment.	Study Class notes properly Special preference will be given for graphs, numericals and definitions
	Questions : (Classroom discussion ,Test and Homework) Intext : 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 Text Book Question: 4.1, 4.2, 4.3, 4.4, 4.6, 4.9, 4.10, 4.11, 4.12, 4.14, 4.16, 4.17, 4.18, 4.19, 4.20, 4.21		
Day-5 03.01.2021	SOLID STATE	Definition (Amorphous & Crystalline Solid, Ionic Solid and Covalent Solid, Isotropy and anisotropy nature Frenkel, Schottky Defects and F-Centre, Numericals Calculation of density and formula of ionic compounds Must study class notes properly 10 years solved assignment.	Study class notes properly and do solved assignment sent on the class whatsapp group
	Questions : (Classroom discussion ,Test and Homework) Intext Question: 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.12, 1.15, 1.16, 1.19, 1.20 Examples: 1.1, 1.2, 1.3 Text Book Question: 1.4, 1.7, 1.9, 1.10, 1.11, 1.13, 1.15, 1.16, 1.17, 1.19, 1.20, 1.21, 1.24, 1.25		
	CO-ORDINATION COMPOUNDS (3Marks)	Basic terms (NCERT text book page No. 240 & 241) Nomenclature of Coordination Compound, Hybridization, structure and bonding (VBT), bonding in metal carbonyls, applications of coordination compounds, Must study class notes properly 10 years solved assignment.	Study class notes properly and do solved assignment sent on the class whatsapp group
	Questions : (Classroom discussion ,Test and Homework) Intext Question: 9.1, 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10 Example : 9.2, 9.3, 9.4, 9.5, 9.7 Text Book Question: 9.3, 9.4, 9.13, 9.15, 9.16, 9.17, 9.18, 9.19, 9.20, 9.21, 9.22, 9.25, 9.26, 9.27		

DATE	CHAPTERS & WEIGHTAGE OF MARKS	IMPORTANT TOPICS	REMARKS
Day-6 04.01.2021	ALCOHOLS, PHENOL AND ETHERS (4/5 Marks)	Nomenclature , Preparation .Chemical reactions of Alcohols (involving cleavage of O-H ,C-O bond). Ethers. Preparation and chemical properties. Esterification reaction. Dehydration of ethanol. Name reactions : Kolbe's reaction, Rimer-Tiemen reaction , Williamson synthesis. Must study class notes properly 10 years solved assignment.	
	Questions : (Classroom discussion ,Test and Homework) Intext : 11.2 , 11.3 , 11.6 , 11.7, 11.8, 11.9, 11.11		

	<p>Examples : 11.2 ,11.3, 11.6. Text book Questions : 11.3 ,11.4, 11.5, 11.6, 11.8, 11.9,11.11, 11.13, 11.14, 11.15, 11.16, 11.18, 11.20, 11.22,11.24, 11.25, 11.28,11.29, 11.31,</p>		
Day-7 05.01.2021	<p>ALDEHYDES,KETONES AND CARBOXYLIC ACIDS (5 Marks)</p>	<p>Structure of Carbonyl group.Prepration of Aldehydes (Rosenmund reaction ,Stephen Reaction ,Etard reaction ,Gatterman Koch reaction) Prepration of ketones. Chemical reactions of Aldehydes and ketones (Nucleophilic addition reaction-Aldol ,cross aldol and cannizzaro reaction. Carboxylic acids ,Prepration and Chemical reactions. <i>Must study class notes properly</i> <i>10 years solved assignment.</i></p>	<p>Special preference will be given to organic conversions and distinguish tests</p>
	<p>Questions : (Classroom discussion ,Test and Homework) Intext :12.2 , 12.5, 12.6, 12.7, 12.8 Examples: 12.2, 12.4 Text Book Questions: 12.1, 12.6, 12.7, 12.8, 12.10, 12.11, 12.12, 12.13, 12.14, 12.15, 12.6, 12.17, 12.18, 12.19,12.20</p>		
Day-8 06.01.2021	<p>P-BLOCK ELEMENTS (5 Marks)</p>	<p>Important Reactions: Hydrolysis and Preparation of Xenon Compounds, Hydrolysis of Ca₃P₂, White P₄ with NaOH Structures: Oxyacids of Nitrogen, Sulphur, Phosphorous and Halogen Xenon Compounds, Interhalogen Compounds. Reasoning concepts <i>Must study class notes properly</i> <i>10 years solved assignment.</i></p>	<p>Special preference will be given for structure and reasoning , Reactions of group15,16,17 and 18</p>
	<p>Text Book Question: 7.2, 7.4, 7.6, 7.8, 7.10, 7.11, 7.12, 7.14, 7.15, 7.16, 7.18, 7.21, 7.23, 7.27, 7.31, 7.32, 7.33, 7.35, 7.36, 7.39 Intext Question: 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, 7.12, 7.15, 7.17, 7.18, 7.19, 7.20, 7.22, 7.24, 7.25, 7.27, 7.29,7.31, 7.32, 7.33, 7.34 Example: 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 7.14, 7.15, 7.16, 7.17, 7.18, 7.19, 7.21,7.22</p>		
Day-9 07.01.2021	<p>D & F- BLOCK ELEMENTS (3 -5 Marks)</p>	<p>Preparation, Properties, structure and use of K₂Cr₂O₇ and KMnO₄,Balancing of equation of oxidation reaction of K₂Cr₂O₇ and KMnO₄ with H₂S, KI, FeSO₄ <i>Must study class notes properly</i> <i>10 years solved assignment.</i></p>	<p>Special preference will be given for structure and reasoning , Reactions of of K₂Cr₂O₇ and KMnO₄</p>
	<p>Questions : (Classroom discussion ,Test and Homework) Intext Question: 8.2, 8.5, 8.8, 8.9, 8.10 Examples: 8.2, 8.4, 8.5, 8.8, 8.9, 2.2, 2.4, 2.6 Text Book Question: 8.2, 8.10, 8.11, 8.12, 8.14, 8.15, 8.16, 8.21, 8.25, 8.27, 8.33, 8.35</p>		
Day-10 08.01.2021	<p>ORGANIC CONVERSIONS AND DISTINGUISH TESTS 2/3 Marks</p>	<p>Ncert text book chapterwise questions , Sample paper and last 10 year questions Order in SN1 & SN2 reaction</p>	
<p>Questions : (Classroom discussion ,Test and Homework) Ncert text book chapterwise questions , Sample paper and last 10 year questions</p>			

Physical Chemistry :-

Practice of all numerical of NCERT intext, examples and back exercise, graphs

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Day-11 09.01.2021	ALKYL HALIDE AND ARYL HALIDE (4/5 Marks)	Nomenclature , Prepration .Physical properties,Chemical reactions of Alkyl halide and aryl halide, do all name reactions and SN1 and SN2 mechanism <i>Must study class notes properly</i> <i>10 years solved assignment.</i>	Special preference will be given to organic conversions and distinguish tests
	Questions : (Classroom discussion ,Test and Homework) Do all intext exercise questions, solved example and back exercise questions of NCERT		
Day-12 10.01.2021	AMINES (3/4 Marks)	Nomenclature , Prepration .Physical properties,Chemical reactions of amines, all name reactions <i>Must study class notes properly</i> <i>10 years solved assignment.</i>	Special preference will be given to organic conversions and distinguish tests
	Questions : (Classroom discussion ,Test and Homework) Do all intext exercise questions, solved example and back exercise questions of NCERT		

Organic chemistry should be revised in different headings taking all the four chapters-

- 1) Distinguish between pair of organic compounds (2 marks)
- 2) Mechanism (2 marks)
- 3) Complete the reactions , word problem, selected conversion (6 marks)
- 4) Reasoning questions (first to cover the questions given in text book) (4 marks)
- 5) Name reactions (2 marks)
- 6) Increasing and decreasing order for the property like boiling point, acid strength, basic strength of amines, reactivity towards SN1 and SN2 REACTIONS, nucleophilic addition reaction
- 7) Word problems from NCERT BACK EXERCISE, INTEXT EXERCISE AND SOLVED EXAMPLE FROM NCERT
- 8) IUPAC NOMENCLATURE OF ORGANIC COMPOUNDS

p- block study strategy –

- 1) Reasoning questions
- 2) Increasing and decreasing order
- 3) Must do NCERT intext, examples and back exercise
- 4) Structures
- 5) Complete the reaction

d- and f - block study strategy –

- 1) Reasoning questions
- 2) Difference between lanthanoids and actinoids
- 3) Complete the reaction of oxidizing character of $K_2Cr_2O_7$ and $KMnO_4$
- 4) Preparation of $K_2Cr_2O_7$ and $KMnO_4$
- 5) Structures
- 6) Must do NCERT intext, examples and back exercise

Co-ordination compound study strategy –

Must do NCERT intext, examples and back exercise