महाराणा प्रताप पी.जी. कालेज, जंगल धूसड़, गोरखपुर

Class : B.Sc. II[nd] **LESSION PLAN : 2019-20** **Subject : Chemistry**

DATE	LECTURE	TEACHER'S NAME	PAPER	CHAPTER	TOPIC
16.07.2019	1	P.K.VERMA	II	Transition Elements	Introduction, Position in Periodic Table
17.07.2019	2	P.K.VERMA	II	Transition Elements	Electronic configuration
18.07.2019	1	DR. S. K.VERNWAL	III	Carbohydrates	Classification
19.07.2019	2	DR. S. K.VERNWAL	III	Carbohydrates	Ring structure of Glucose
20.07.2019	1	DR. R. SAHAY	I	Thermodynamic-I	Introduction: definition of terms system, surroundings, open, isolated system Extensive& Intensive properties
22.07.2019		DR. R. SAHAY	CT		
23.07.2019	3	P.K.VERMA	II	Transition Elements	Atomic & Ionic Radii
24.07.2019	4	P.K.VERMA	II	Transition Elements	Variable Oxidation State
25.07.2019	3	DR. S. K.VERNWAL	III	Carbohydrates	Ring structure of Fructose
26.07.2019	4	DR. S. K.VERNWAL	III	Carbohydrates	Properties of Glucose and Fructose
27.07.2019	2	DR. R. SAHAY	I	Thermodynamic-I	State & Path function & their differentials, Reversible & Irreversible Process
29.07.2019		DR. R. SAHAY	ME		
30.07.2019	5	P.K.VERMA	II	Transition Elements	Ability to form complexes
31.07.2019	6	P.K.VERMA	II	Transition Elements	Formation of coloured ions
01.08.2019	5	DR. S. K.VERNWAL	III	Carbohydrates	Interconversions in the Carbohydrate series
02.08.2019	6	DR. S. K.VERNWAL	III	Carbohydrates	Ruff-degradation
03.08.2019	3	DR. R. SAHAY	I	Thermodynamic-I	Concept of heat & work, First law of Thermodynamics
06.08.2019		DR. R. SAHAY	CT		
07.08.2019	7	P.K.VERMA	II	Transition Elements	Magnetic(μ_s &μ_{eff}) behaviour
08.08.2019	8	P.K.VERMA	II	Transition Elements	Catalytic behaviour
09.08.2019	7	DR. S. K.VERNWAL	III	Aromatic Hydrocarbons	General method of preparation
10.08.2019	8	DR. S. K.VERNWAL	III	Aromatic Hydrocarbons	Molecular orbital structure of benzene
13.08.2019	4	DR. R. SAHAY	I	Thermodynamic-I	Concept of Internal Energy Enthalpy, Heat capacities at constant volume Pressure & their relations
14.08.2019		DR. R. SAHAY	CT		
16.08.2019	9	P.K.VERMA	II	Transition Elements	General comparative treatment of 4d & 5d elements with their 3d element
17.08.2019	10	P.K.VERMA	II	Acid Base Concept	Introduction, Lewis concept
19.08.2019	9	DR. S. K.VERNWAL	III	Aromatic Hydrocarbons	Aromaticity, Huckel's Rule
20.08.2019	10	DR. S. K.VERNWAL	III	Mechanism of Aromatic Electrophilic Substitutions	Halogenation &Nitration

21.08.2019	5	DR. R. SAHAY	I	Thermodynamic-I	Calculation of W, q, dU & dH for the expansion of Ideal gas under Isothermal
22.08.2019		DR. R. SAHAY	CT		
24.08.2019	11	P.K.VERMA	II	Acid Base Concept	Classification of Hard & Soft Acid & Bases
26.08.2019	12	P.K.VERMA	II	Acid Base Concept	Classification of Hard & Soft Acid & Bases
27.08.2019	11	DR. S. K.VERNWAL	III	Mechanism of Aromatic Electrophilic Substitutions	Sulphonation, Friedel-Craft's alkylation
28.08.2019	12	DR. S. K.VERNWAL	III	Mechanism of Aromatic Electrophilic Substitutions	Friedel-Craft's acylation
29.08.2019	6	DR. R. SAHAY	I	Thermodynamic-I	Adiabatic condition for a reversible process
30.08.2019		DR. R. SAHAY	ME		
02.09.2019	13	P.K.VERMA	II	Acid Base Concept	Application of HSAB Principle
03.09.2019	14	P.K.VERMA	II	Acid Base Concept	Application of HSAB Principle
04.09.2019	13	DR. S. K.VERNWAL	III	Mechanism of Aromatic Electrophilic Substitutions	Orientation in aromatic substitution
05.09.2019	14	DR. S. K.VERNWAL	III	Mechanism of Aromatic Electrophilic Substitutions	Ortho-para ratio
06.09.2019	7	DR. R. SAHAY	I	Thermodynamic-I	Calculation from the thermodynamic data, Kirchhoff's Equation
07.09.2019		DR. R. SAHAY	CT		
09.09.2019	15	P.K.VERMA	II	Coordination Compounds	Introduction, Definition & Classification of Ligands
11.09.2019	16	P.K.VERMA	II	Coordination Compounds	Werner's Postulates
13.09.2019	15	DR. S. K.VERNWAL	III	Aromatic Halogen Compounds	Types of aromatic halogen compounds, Chlorobenzene
14.09.2019	16	DR. S. K.VERNWAL	III	Aromatic Halogen Compounds	Benzyl chloride
16.09.2019	8	DR. R. SAHAY	I	Thermodynamic-II	Second Law of thermodynamic , concept of Entropy, Entropy as a state function
17.09.2019		DR. R. SAHAY	CT		
19.09.2019	17	P.K.VERMA	II	Coordination Compounds	Sidgwick's effective atomic number concept
20.09.2019	18	P.K.VERMA	II	Coordination Compounds	Valence bond theory
21.09.2019	17	DR. S. K.VERNWAL	III	Aromatic Nitro Compounds	Nitrobenzene, Reduction of nitrobenzene
23.09.2019	18	DR. S. K.VERNWAL	III	Aromatic Nitro Compounds	m-Dinitro benzene, TNT
24.09.2019	9	DR. R. SAHAY	I	Thermodynamic-II	Entropy as a function of V& T, P & T , Entropy change in physical process
25.09.2019		DR. R. SAHAY	ME		
26.09.2019	19	P.K.VERMA	II	Coordination Compounds	Valence bond theory
27.09.2019	20	P.K.VERMA	II	Coordination Compounds	Chelate effect
30.09.2019	19	DR. S. K.VERNWAL	III	Aromatic Amino Compounds & Diazonium Salts	Aniline
01.10.2019	20	DR. S. K.VERNWAL	III	Aromatic Amino Compounds & Diazonium Salts	Benzyl amine

03.10.2019	21	P.K.VERMA	II	Coordination Compounds	Nomenclature of only mono and dinuclear complexes
04.10.2019		P.K.VERMA	CT		
05.10.2019	21	DR. S. K.VERNWAL	III	Aromatic Amino Compounds & Diazonium Salts	Basicity of aniline & Toluidines
12.10.2019	22	DR. S. K.VERNWAL	III	Aromatic Amino Compounds & Diazonium Salts	Benzene Diazonium chloride
14.10.2019	10	DR. R. SAHAY	I	Thermodynamic-II	Gibbs Helmholtz function: Criteria for thermodynamics equilibrium & change in entropy
15.10.2019	11	DR. R. SAHAY	I	Chemical Equlibrium	Equilibrium constant and free energy
16.10.2019	22	P.K.VERMA	II	Coordination Compounds	Stereochemistry of coordination number 2,4 & 6
17.10.2019		P.K.VERMA	CT		
18.10.2019	23	DR. S. K.VERNWAL	III	Aromatic Amino Compounds & Diazonium Salts	Synthetic uses of benzenediazonium chloride
21.10.2019	24	DR. S. K.VERNWAL	III	Aromatic Sulphonic Acids	Benzene sulphonic acid, Sulphanilic acid
22.10.2019	12	DR. R. SAHAY	I	Chemical Equlibrium	Thermodynamic derivation of Law of Mass action, Le-Chattelier's principle
23.10.2019	13	DR. R. SAHAY	I	Electrochemistry-I	Electrical transport conduction in metals & in electrolyte solutions, specific conductance
30.10.2019	23	P.K.VERMA	II	Coordination Compounds	$[Ag(NH_3)_2]^+$,$[Ag(CN)_2]^-$,$[Ni(CN)_4]^{n-}$
31.10.2019		P.K.VERMA	ME		
01.11.2019	25	DR. S. K.VERNWAL	III	Aromatic Sulphonic Acids	Saccharine & Chloramine-T
04.11.2019	26	DR. S. K.VERNWAL	III	Phenols	Acid character, Reactions of phenol
05.11.2019	14	DR. R. SAHAY	I	Electrochemistry-I	Equivalent conductance, Measurement of equivalent conductance, variation of equivalent & specific conductance with dilution
06.11.2019	15	DR. R. SAHAY	I	Electrochemistry-I	Migration of ions & Kohlrausch law, Arrhenius theory of electrolyte dissociation & its limitations
07.11.2019	24	P.K.VERMA	II	Coordination Compounds	$[Cu(NH_3)_4]^{2+}$,$[Zn(NH_3)_4]^{2+}$,$[MnO_4]^-$
09.11.2019		P.K.VERMA	CT		
11.11.2019	27	DR. S. K.VERNWAL	III	Phenols	Picric acid
13.11.2019	28	DR. S. K.VERNWAL	III	Phenols	Picric acid
14.11.2019	16	DR. R. SAHAY	I	Electrochemistry-I	Weak and strong electrolytes, Ostwald's dilution law, its uses & limitations
15.11.2019	17	DR. R. SAHAY	I	Electrochemistry-I	Debye-Huckel-Onsager's equation for strong electrolytes
16.11.2019	25	P.K.VERMA	II	Coordination Compounds	$[Fe(CN)_6]^{3-}$,$[Fe(CN)_6]^{4-}$,$[FeF_6]^{3-}$
18.11.2019		P.K.VERMA	CT		
19.11.2019	28	DR. S. K.VERNWAL	III	Aromatic Alcohols Aldehydes & Ketones	Benzaldehyde & Salicyldehyde Acetphenone & Benzophenone
20.11.2019	29	DR. S. K.VERNWAL	III	Aromatic Acids	Preparation & Properties of Cinnamic acid
21.11.2019	18	DR. R. SAHAY	I	Electrochemistry-I	Activity and activity coefficient, Transport number definition & determination by Hittorf method & moving boundary method

22.11.2019	19	DR. R. SAHAY	I	Electrochemistry-I	Applications of conductivity measurements: determination of degree of dissociation, determination of K_a of acids
23.11.2019	26	P.K.VERMA	II	Coordination Compounds	$[Fe(H_2O)_6]^{3+}$,$[Fe(C_2O_4)_3]^{3-}$,$[Co(NH_3)_6]^{3+}$
25.11.2019		P.K.VERMA	ME		
26.11.2019	30	DR. S. K.VERNWAL	III	Aromatic Acids	Phthalic acid & Salicylic acid
27.11.2019	31	DR. S. K.VERNWAL	III	Aromatic Acids	Acid structure of benzoic acid and substituted benzoic acids
28.11.2019	20	DR. R. SAHAY	I	Electrochemistry-I	Determination of solubility product of a sparingly soluble salts, conductometric titration
29.11.2019	21	DR. R. SAHAY	I	Electrochemistry-II	Types of reversible electrodes-gas-metal ion, metal-metal ion, metal insoluble salt-anion & redox electrodes,
30.11.2019	32	DR. S. K.VERNWAL	III	Polynuclear Hydrocarbons	Non condensed system: Biphenyl
02.12.2019		DR. S. K.VERNWAL	CT		
03.12.2019	22	DR. R. SAHAY	I	Electrochemistry-II	Electrode reactions, Nernst equation, derivation of cell E.M.F & single electrode potential
07.12.2019	23	DR. R. SAHAY	I	Electrochemistry-II	Standard Hydrogen electrode-reference electrodes-standard electrode potential
09.12.2019	27	P.K.VERMA	II	Coordination Compounds	$[Co(en)_3]^{3+}$,$[Ni(NH_3)_6]^{2+}$,$[PbCl_6]^{2-}$
11.12.2019	28	P.K.VERMA	II	Coordination Compounds	Isomerism
12.12.2019	33	DR. S. K.VERNWAL	III	Polynuclear Hydrocarbons	Condensed system: Naphthalene
13.12.2019		DR. S. K.VERNWAL	CT		
14.12.2019	24	DR. R. SAHAY	I	Electrochemistry-II	Sign conventions, electrochemical series & its significance, Electrolytic & Galvanic cells
16.12.2019	25	DR. R. SAHAY	I	Electrochemistry-II	Reversible & Irreversible cells, Conventional representation of electrochemical cells
17.12.2019	29	P.K.VERMA	II	Coordination Compounds	Various types of Isomerism
18.12.2019	30	P.K.VERMA	II	Coordination Compounds	Stereoisomerism in CN-4 & CN-6
19.12.2019	34	DR. S. K.VERNWAL	III	Polynuclear Hydrocarbons	Naphthols & Naphthyl amines
20.12.2019		DR. S. K.VERNWAL	CT		
21.12.2019	26	DR. R. SAHAY	I	Electrochemistry-II	E.M.F. of a cell & its measurements, Computation of cell E.M.F., Calculation of thermodynamic quantities of cell reactions (ΔG, ΔH & K)
23.12.2019	27	DR. R. SAHAY	I	Electrochemistry-II	Concentration cell with and without transport, Liquid junction potentials, Application of concentration cells
24.12.2019	31	P.K.VERMA	II	Non aqueous Solvents	General introduction & Classification of solvent
26.12.2019	32	P.K.VERMA	II	Non aqueous Solvents	Characteristics proportion of solvents
27.12.2019	35	DR. S. K.VERNWAL	III	Heterocyclic Compounds	Preparation & properties of Furan
28.12.2019		DR. S. K.VERNWAL	ME		
30.12.2019	28	DR. R. SAHAY	I	Electrochemistry-II	Valency of ions, solubility product & activity coefficient, Potentiometric titrations, Definition of pH & pKa

31.12.2019	29	DR. R. SAHAY	I	Electrochemistry-II	Determination of pH using Hydogen, Quinhydrone & glass electrode by Potentiometric method
01.01.2020	33	P.K.VERMA	II	Non aqueous Solvents	Chemical reaction occurring in liquid NH_3
02.01.2020	34	P.K.VERMA	II	Non aqueous Solvents	Chemical reaction occurring in liquid NH_3
03.01.2020	36	DR. S. K.VERNWAL	III	Heterocyclic Compounds	Pyrrole & Thiophene
04.01.2020		DR. S. K.VERNWAL	CT		
06.01.2020	30	DR. R. SAHAY	I	Electrochemistry-II	Buffers-mechanism of buffer action, Henderson-Hazel equation, hydrolysis of salts, Electrochemical corrosion & its prevention
07.01.2020	31	DR. R. SAHAY	I	Phase Equilibrium	Phase, component & degree of freedom, derivation of Gibbs Phase rule
08.01.2020	35	P.K.VERMA	II	Non aqueous Solvents	Chemical reaction occurring in liquid SO_2
09.01.2020	36	P.K.VERMA	II	Non aqueous Solvents	Chemical reaction occurring in liquid SO_2
10.01.2020	37	DR. S. K.VERNWAL	III	Heterocyclic Compounds	Pyridine
11.01.2020		DR. S. K.VERNWAL	CT		
13.01.2020	32	DR. R. SAHAY	I	Phase Equilibrium	Phase equilibria of one component system- water, sulpher & Hellium
16.01.2020	33	DR. R. SAHAY	I	Phase Equilibrium	First & Second order phase transitions, Phase equilibria of two component systems-solid-liquid equilibria
17.01.2020	37	P.K.VERMA	II	Non aqueous Solvents	Chemical reaction occurring in liquid SO_2
18.01.2020	38	P.K.VERMA	II	Concept of Electrode Potentials	EMF diagram
20.01.2020	38	DR. S. K.VERNWAL	III	Numerical Problems	Determination of structure based on chemical reactions
22.01.2020		DR. S. K.VERNWAL	CT		
23.01.2020	34	DR. R. SAHAY	I	Phase Equilibrium	Simple Eutectic-Pb-Ag system, Desilverisation of Pb, System involving compound formation with a congruent melting point (Mg-Zn)
24.01.2020	35	DR. R. SAHAY	I	Phase Equilibrium	Incongruent melting point ($CuSO_4.H_2O$), Nernst distribution law & its thermodynamic derivation
25.01.2020	39	P.K.VERMA	II	Concept of Electrode Potentials	EMF diagram & their utility
27.01.2020	40	P.K.VERMA	II	Concept of Electrode Potentials	Numerical problems
28.01.2020	39	DR. S. K.VERNWAL	III	Numerical Problems	Determination of structure based on chemical reactions
29.01.2020		DR. S. K.VERNWAL	ME		
30.01.2020	36	DR. R. SAHAY	I	Phase Equilibrium	Incongruent melting point ($CuSO_4.H_2O$), Nernst distribution law & its thermodynamic derivation