LECTURE PLAN FOR NEET_Chemistry (2021)

S. No.	Chapter Name	Sub-Topic	No. of Lecture	Date of Lecture	Completion Date	*Holidays* Date	Occasion
1	Structure of Atom	Sub-atomic particles : Discovery of electron, Charge to mass ratio of electron, Charge on electron, Discovery of proton and neutron. Thomson model of atom, Rutherford's nuclear model of atom, Atomic and Mass number, Isobars and isotopes.	1	06/07/2021	29/07/2021	21-Jul-21	Bakre-id
2		Sub-atomic particles : Discovery of electron, Charge to mass ratio of electron, Charge on electron, Discovery of proton and neutron. Thomson model of atom, Rutherford's nuclear model of atom, Atomic and Mass number, Isobars and isotopes.	1	07/07/2021		15-Aug-21	Independence Day
3		Particles nature of electromagnetic radiation : Plank's quantum theory	1	08/07/2021		22-Aug-21	Rakshabandhan
4		Particles nature of electromagnetic radiation : Plank's quantum theory	1	13/07/2021		30-Aug-21	Janamashtmi
5		Photoelectric effect, Dual behaviour of electromagnetic radiation.	1	14/07/2021		02-Oct-21	Gandhi Jayanti
6		Emission and absorption spectra, Line spectrum of hydrogen, Bohr's model for hydrogen atom, Explanation of Bohr's model.	1	15/07/2021		15-Oct-21	Dusshera
7		Dual behaviour of matter, Heisenberg's uncertainty principle, Significance of uncertainty principle, Reason for the failure of the Bohr model.	1	20/07/2021		19-Oct-21	Eid-e-Milad
8		Quantum mechanics, Hydrogen atom and the Schrodinger equation, Orbitals and Quantum numbers, Shapes of atomic orbitals.	1	22/07/2021		04-Nov-21	Diwali
9		Quantum mechanics, Hydrogen atom and the Schrodinger equation, Orbitals and Quantum numbers, Shapes of atomic orbitals.	1	27/07/2021		5-Nov-21	Diwali
10		Energies of orbitals, Filling of orbitals in atom: Aufbau principle, Pauli exclusion principle, Hund's rule of maximum multiplicity, Electronic configuration of atoms, Stability of completely filled and half filled sub-shells.	1	28/07/2021		10-Nov-21	Chhat Pooja

11		Energies of orbitals, Filling of orbitals in atom: Aufbau principle, Pauli exclusion principle, Hund's rule of maximum multiplicity, Electronic configuration of atoms, Stability of completely filled and half filled sub-shells.	1	29/07/2021		19-Nov-21	**Guru Nanak Jayanti**
12	**Classification of Elements and Periodicity in Properties**	Genesis of periodic classification, Modern periodic law and the present form of the periodic table.	1	03/08/2021		25-Dec-21	**Christmas Day**
13		Nomenclature of elements with atomic numbers > 100, Electronic configurations in periods, Groupwise electronic configuration, s, p, d and f-block elements.	1	04/08/2021		1-Jan-22	**New Year**
14		Metals, Non-metals and metalloids, Trend in physical properties	1	05/08/2021	**11/08/2021**	26-Jan-22	**Republic Day**
15		Atomic radius, Ionic radius, Ionisation enthalpy	1	07/08/2021		19-Mar-22	**Holi**
16		Electron gain enthalpy, Electronegativity	1	10/08/2021			
17		Periodic trends in chemical properties : Oxidation states, Anomalous properties of second period elements. Periodic trends and chemical reactivity.	1	11/08/2021			
18	**Chemical Bonding and Molecular Structure**	Kossel-Lewis approach to chemical bonding, Octet rule, Covalent bond, Lewis representation of simple molecules	1	12/08/2021	**01/09/2021**		
19		Formal charge, Limitations of octet rule : Incomplete octet of the central atom, odd-electron molecule, The expanded octet, Ionic or electrovalent bond, Lattice enthalpy	1	14/08/2021			
21		Bond parameters : Bond length, Bond angles, Bond enthalpy, Bond-order, Resonance structures. Resonance	1	17/08/2021			
22		Polarity of bonds : Dipole moment Percentage ionic character	1	18/08/2021			
23		Polarity of bonds : Dipole moment Percentage ionic character	1	19/08/2021			
24		The valence shell electron pair repulsion theory	1	21/08/2021			
25		The valence shell electron pair repulsion theory	1	24/08/2021			
26		Valence bond theory : Orbital overlap concept, Directional properties of bonds, Overlapping of atomic orbitals.	1	25/08/2021			
27		Types of overlapping and nature of covalent bonds. Strength of s and p-bonds, Hybridisation : Features and conditions	1	26/08/2021			
28		Types of hybridisation : sp2, sp3, dsp2, sp3d, sp3d2 and hybridisation.	1	28/08/2021			
29		Molecular oribit theory : Features, Linear combination of atomic orbitals, Conditions for the combination of atomic orbitals, Types of molecular orbitals.	1	31/08/2021			

30		Energy level diagram for molecular orbitals, Electronic configuration and molecular behaviour, Bonding in same homonuclear diatomic molecules, Hydrogen bonding.	1	01/09/2021			
31	**Redox Reactions**	Classification idea of redox reactions, Redox reactions in terms of electron transfer reactions, Competitive electron transfer reactions, Oxidation number and its calculation, Fractional oxidation number.	1	02/09/2021	**07/09/2021**		
32		Types of redox reactions: Combination, decomposition, Displacement and disproportionation reactions, Balancing of redox reactions.	1	04/09/2021			
33		Redox reactions as the basis for titrations, Limitations of concept of oxidation number. Redox reactions and electrode potentials, Redox couple, Working of Daniell cell, Electrochemical series.	1	07/09/2021			
34	**Hydrogen**	Position, Occurrence, Isotopes, Preparation, Properties and uses of hydrogen hydrides.	1	08/09/2021	**11/09/2021**		
35		Position, Occurrence, Isotopes, Preparation, Properties and uses of hydrogen hydrides.	1	09/09/2021			
37		Hardness of H2O and its removal, H2O2 : Preparation and properties, D2O, Dihydrogen as fuel	1	11/09/2021			
38	**Organic**	Tetravalence of carbon, Structure of organic compounds, Classification of organic compounds,	1	14/09/2021			
39		Tetravalence of carbon, Structure of organic compounds, Classification of organic compounds,	1	15/09/2021			
40		Nomenclature of organic compounds (excluding functional group). IUPAC nomenclature of organic compounds including mono and bi functional groups.	1	16/09/2021			
41		Nomenclature of organic compounds (excluding functional group). IUPAC nomenclature of organic compounds including mono and bi functional groups.	1	18/09/2021			
42		Isomerism : Structural isomerism including tautomerism	1	21/09/2021			
43		Isomerism : Structural isomerism including tautomerism	1	22/09/2021			
44		Stereoisomerism and Conformations	2	25/09/2021			
45		Fundamental concepts in organic reaction, Mechanism : Bond fission, Nucleophile and electrophile, Inductive and electromeric effect, Resonance effect.	2	29/09/2021			

46	**Organic Chemistry**	Fundamental concepts in organic reaction, Mechanism : Bond fission, Nucleophile and electrophile, Inductive and electromeric effect, Resonance effect.	1	30/09/2021	**16/10/2021**		
47		Hyperconjugation, Aromaticity and anti-aromaticity.	1	05/10/2021			
48		Hyperconjugation, Aromaticity and anti-aromaticity.	1	06/10/2021			
49		Reaction intermediates : Carbocation, Carbanion, Carbon free radicals, Carbene.	2	09/10/2021			
50		Reaction intermediates : Carbocation, Carbanion, Carbon free radicals, Carbene.	2	13/10/2021			
51		Types of organic reactions and mechanism : Substitution, Addition, Elimination and rearrangement reactions, Purificaiton of organic compounds, Qualitative and quantitative analysis.	1	14/10/2021			
52		Types of organic reactions and mechanism : Substitution, Addition, Elimination and rearrangement reactions, Purificaiton of organic compounds, Qualitative and quantitative analysis.	1	16/10/2021			
53	**Hydrocarbons**	Alkanes : Nomenclature and isomerism, Preparation and Properties.	2	21/10/2021	**18/11/2021**		
54		Alkanes : Nomenclature and isomerism, Preparation and Properties.	1	23/10/2021			
55		Alkenes : Nomenclature and isomerism, Preparation	3	28/10/2021			
57		Alkenes : Properties	2	02/11/2021			
59		Alkynes : Nomenclature and isomerism, Preparation and Properties.	2	06/11/2021			
60		Alkynes : Nomenclature and isomerism, Preparation and Properties.	2	11/11/2021			
61		Aromatic hydrocarbons : Nomenclature, Preparation and Properties	1	13/11/2021			
62		Aromatic hydrocarbons : Nomenclature, Preparation and Properties	2	17/11/2021			
63		o, p and m-directing groups in electrophilic substitution reaction	1	18/11/2021			
64		Thermodynamics terms : System and surroundings, Types of system, The state of the system, The internal energy as a state function	1	20/11/2021			

65	**Thermodynamics**	Work and Heat First law of thermodynamics. Isothermal and free expansion of an ideal gas. Extensive and intensive properties.	1	23/11/2021	**08/12/2021**		
66		Heat capacity, Relation between Cv and Cp for an ideal gas; Calorimetry	1	24/11/2021			
67		Heat capacity, Relation between Cv and Cp for an ideal gas; Calorimetry	1	25/11/2021			
68		enthalpy and thermo chemical equation. Hess's law of constant heat summation.	1	27/11/2021			
69		enthalpy and thermo chemical equation. Hess's law of constant heat summation.	1	30/11/2021			
70		Enthalpy of combustion, Atomization, Bond-dissociation, Solution, Lattice and neutralisation	1	01/12/2021			
71		Enthalpy of combustion, Atomization, Bond-dissociation, Solution, Lattice and neutralisation	1	02/12/2021			
72		Spontaneity and entropy, Second law of thermodynamics	1	04/12/2021			
73		Free energy change and criteria for spontaneity. Third law of thermodynamics.	1	07/12/2021			
74		Free energy change and criteria for spontaneity. Third law of thermodynamics.	1	08/12/2021			
75	**Equilibrium**	Chemical equilibrium : Liquid-vapour, Solid-liquid and solid-vapour equilibria, General characteristics of equilibria involving physical and chemical process	1	09/12/2021	**04/01/2022**		
76		Law of chemical equilibrium and equilibrium constant	1	11/12/2021			
77		Law of chemical equilibrium and equilibrium constant	1	14/12/2021			
78		Homogeneous and heterogeneous equilibria, Application of equilibrium constants. Predicting the extent and the direction of reactions. Calculating equilibrium concentrations.	1	15/12/2021			
80		Relationship between equilibrium constant, Reaction quotient and Gibb's energy, Factors affecting equilibria: Change in concentration, pressure, temperature and effect of catalyst and effect of addition of inert gas.	1	16/12/2021			
81		Acids bases: Arrhenius, Bronsted-Lowry and Lewis concepts.	1	18/12/2021			
82		Ionisation of acids and bases, Ionisation constant of water and its ionic product.	1	21/12/2021			

83		The pH scale, ionisation constants of weak acids and weak bases, Relation between Ka and Kb. Di and Polybasic acids and Polyacidic bases.	1	22/12/2021			
84		The pH scale, ionisation constants of weak acids and weak bases, Relation between Ka and Kb. Di and Polybasic acids and Polyacidic bases.	1	23/12/2021			
85		Factors affecting acid and bases - Strength, Common ion effect in the ionisation of acids and bases, Buffer solution	1	28/12/2021			
86		Factors affecting acid and bases - Strength, Common ion effect in the ionisation of acids and bases, Buffer solution	1	29/12/2021			
87		Salt hydrolysis and solubility product.	1	30/12/2021			
88		Salt hydrolysis and solubility product.	1	04/01/2022			
89	**The s-Block Elements**	Alkali metals : Physical and chemical properties, Salt of oxo acids, Anomalous properties of Lithium, Similarity between Li and Mg, Compounds of Na : $Na_2CO_3.10H_2O$, NaCl, NaOH, $NaHCO_3$, Biological importance of Na and K.	1	05/01/2022	**11/01/2022**		
90		Alkali metals : Physical and chemical properties, Salt of oxo acids, Anomalous properties of Lithium, Similarity between Li and Mg, Compounds of Na : $Na_2CO_3.10H_2O$, NaCl, NaOH, $NaHCO_3$, Biological importance of Na and K.	1	06/01/2022			
91		Alkaline earth metals : Physical and chemical properties, Salts of oxoacids, Anomalous behaviour of beryllium, Diagonal relationship between Be and Al. Compounds of Ca : CaO, $Ca(OH)_2$, $CaCO_3$, $CaSO_4.1/2H_2O$. Biological importance of Mg and Ca.	1	08/01/2022			
92		Alkaline earth metals : Physical and chemical properties, Salts of oxoacids, Anomalous behaviour of beryllium, Diagonal relationship between Be and Al. Compounds of Ca : CaO, $Ca(OH)_2$, $CaCO_3$, $CaSO_4.1/2H_2O$. Biological importance of Mg and Ca.	1	11/01/2022			
93		General electronic configuration and oxidation states of p-block elements, Inert pair effect, The boron family : Physical and chemical properties. Compound of boron : Borax, Orthoboric acid and diborane, Uses of B, Al and their compounds.	2	13/01/2022			

94	**The p-Block Elements**	General electronic configuration and oxidation states of p-block elements, Inert pair effect, The boron family : Physical and chemical properties. Compound of boron : Borax, Orthoboric acid and diborane, Uses of B, Al and their compounds.	1	15/01/2022	**19/01/2022**		
95		The carbon family : Physical properties : Chemical properties of group 14 elements, Allotropes of carbon, Compounds of C and Si : CO, CO2, SiO2, silicones, silicates and zeolites.	1	18/01/2022			
96		The carbon family : Physical properties : Chemical properties of group 14 elements, Allotropes of carbon, Compounds of C and Si : CO, CO2, SiO2, silicones, silicates and zeolites.	1	19/01/2022			
97	**Environmental Chemistry and**	Environmental chemistry	1	20/01/2022	**22/01/2022**		
98		Environmental chemistry	1	22/01/2022			