

Physics

II PUC

Chapter-1 Electric charges and fields

RETAINED PORTION	DELETED PORTION
1.1 Introduction 1.2 Electric Charge 1.3 Conductors and Insulators 1.4 Charging by Induction 1.5 Basic Properties of Electric Charge 1.6 Coulomb's Law 1.7 Forces between Multiple Charges 1.8 Electric Field 1.9 Electric Field Lines 1.10 Electric Flux 1.11 Electric Dipole 1.12 Dipole in a Uniform External Field 1.13 Continuous Charge Distribution 1.14 Gauss's Law 1.15 Applications of Gauss's Law 1.15.1 Field due to infinitely long straight uniformly charged wire. 1.15.2 Field due to uniformly charged infinite plane sheet.	1.15.3 Uniformly charged thin spherical shell (field inside and outside).

Chapter-2 ELECTROSTATIC POTENTIAL AND CAPACITANCE

RETAINED PORTION	DELETED PORTION
2.1 Introduction 2.2 Electrostatic Potential 2.3 Potential due to a Point Charge 2.4 Potential due to an Electric Dipole 2.5 Potential due to a System of Charges 2.6 Equipotential Surfaces 2.7 Potential Energy of a System of Charges 2.8 Potential Energy in an External Field 2.9 Electrostatics of Conductors 2.10 Dielectrics and Polarisation 2.11 Capacitors and Capacitance 2.12 The Parallel Plate Capacitor 2.13 Effect of Dielectric on Capacitance 2.14 Combination of Capacitors 2.15 Energy Stored in a Capacitor	Nil

Chapter-3 Current Electricity

RETAINED PORTION	DELETED PORTION
3.1 Introduction 3.2 Electric Current 3.3 Electric Currents in Conductors 3.4 Ohm's law	Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors

3.5 Drift of Electrons and the Origin of Resistivity 3.6 Limitations of Ohm's Law 3.8 Temperature Dependence of Resistivity 3.9 Electrical Energy, Power 3.11 Cells, emf, Internal Resistance 3.12 Cells in Series and in Parallel 3.13 Kirchoff's Rules 3.14 Wheatstone Bridge 3.15 Meter Bridge 3.16 Potentiometer	
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Chapter-4 Moving Charges and Magnetism

RETAINED PORTION	DELETED PORTION
4.1 Introduction 4.2 Magnetic Force 4.3 Motion in a Magnetic Field 4.4 Motion in Combined Electric and Magnetic Fields 4.4.1 velocity selector 4.5 Magnetic Field due to a Current Element, Biot-Savart Law 4.6 Magnetic Field on the Axis of a Circular Current Loop 4.7 Ampere's Circuital Law 4.8 The Solenoid and the Toroid 4.9 Force between Two Parallel Currents, the Ampere 4.10 Torque on Current Loop, Magnetic Dipole 4.11 The Moving Coil Galvanometer	4.4.2 Cyclotron

Chapter-5 Magnetism and Matter

RETAINED PORTION	DELETED PORTION
5.1 Introduction 5.2 The Bar Magnet 5.2.1 The magnetic field lines 5.3 Magnetism and Gauss's Law 5.4 The Earth's Magnetism 5.5 Magnetisation and magnetic intensity	5.2.2 Magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. 5.2.3 Torque on a magnetic dipole (bar magnet) in a uniform magnetic field 5.6 Para-, dia- and ferro - magnetic substances, with examples. 5.7 Electromagnets and factors affecting their strengths, permanent magnets.

Chapter-6 ELECTROMAGNETIC INDUCTION

RETAINED PORTION	DELETED PORTION
6.1 Introduction 6.2 The Experiments of Faraday and Henry 6.3 Magnetic Flux	Nil

6.4 Faraday's Law of Induction 6.5 Lenz's Law and Conservation of Energy 6.6 Motional Electromotive Force 6.7 Energy Consideration: A Quantitative Study 6.8 Eddy Currents 6.9 Inductance 6.10 AC Generator	
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Chapter-7 Alternating Current

RETAINED PORTION	DELETED PORTION
7.1 Introduction 7.2 AC Voltage Applied to a Resistor 7.3 Representation of AC Current and Voltage by Rotating Vectors — Phasors 7.4 AC Voltage Applied to an Inductor 7.5 AC Voltage Applied to a Capacitor 7.6 AC Voltage Applied to a Series LCR Circuit 7.8 LC Oscillations 7.9 Transformers	7.7 Power factor, wattless current

Chapter 8 Electromagnetic Waves

RETAINED PORTION	DELETED PORTION
8.1 Introduction 8.3 Electromagnetic Waves 8.4 Electromagnetic Spectrum	8.2 Basic idea of displacement current

Chapter 9 Ray Optics and Optical Instruments

RETAINED PORTION	DELETED PORTION
9.1 Introduction 9.3 Refraction 9.4 Total Internal Reflection 9.5 Refraction at Spherical Surfaces and by Lenses 9.6 Refraction through a Prism 9.7 Some Natural Phenomena due to Sunlight 9.7.1 the rain bow 9.8 Optical Instruments (except resolving power microscope and astronomical telescope)	9.2 Reflection of light, spherical mirrors, (recapitulation) mirror formula, 9.7.2 Scattering of light - blue colour of sky and reddish appearance of the sun at sunrise and sunset.

Chapter 10 WAVE OPTICS

RETAINED PORTION	DELETED PORTION
10.1 Introduction 10.2 Huygens Principle 10.3 Refraction and Reflection of Plane Waves using Huygens Principle 10.4 Coherent and Incoherent Addition of Waves	10.6.3 Resolving power of microscope and astronomical telescope. 10.7 Polarisation, plane polarised light, Brewster's law, uses of plane

10.5 Interference of Light Waves and Young's Experiment 10.6 Diffraction 10.6.1 The single slit 10.6.2 Seeing the single slit diffraction pattern 10.6.4 the validity of ray optics	polarised light and Polaroids
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Chapter-11 Dual Nature of radiation and matter

RETAINED PORTION	DELETED PORTION
11.1 Introduction 11.2 Electron Emission 11.3 Photoelectric Effect 11.4 Experimental Study of Photoelectric Effect 11.5 Photoelectric Effect and Wave Theory of Light 11.6 Einstein's Photoelectric Equation: Energy Quantum of Radiation 11.7 Particle Nature of Light: The Photon 11.8 Wave Nature of Matter	11.9 Davisson-Germer experiment

Chapter-12 Atoms

RETAINED PORTION	DELETED PORTION
12.1 Introduction Experiment 12.2 Alpha particle Scattering and Rutherford's Nuclear Model of Atom 12.3 Atomic Spectra 12.4 Bohr Model of the Hydrogen Atom 12.5 The Line Spectra of the Hydrogen Atom 12.6 De Broglie's Explanation of Bohr's Second Postulate of Quantisation	Nil

Chapter-13 NUCLEI

RETAINED PORTION	DELETED PORTION
13.1 Introduction 13.2 Atomic Masses and Composition of Nucleus 13.3 Size of the Nucleus 13.4 Mass Energy and Nuclear Binding Energy (except binding energy per nucleon and its variation with mass number) 13.5 Nuclear Force 13.7 Nuclear Energy	13.6 Radioactivity, alpha, beta and gamma particles/rays and their properties; radioactive decay law, half-life and mean life. Binding energy per nucleon and its variation with mass number

Chapter 14 Semiconductor Electronics: Materials, Devices and Simple Circuits

RETAINED PORTION	DELETED PORTION
14.1 Introduction 14.2 Classification of Metals, Conductors and Semiconductors 14.3 Intrinsic Semiconductor 14.4 Extrinsic Semiconductor	14.8.1 Zener diode and their characteristics, zener diode as a voltage regulator

14.5 pn Junction 14.6 Semiconductor Diode 14.7 Application of Junction Diode as a Rectifier 14.8 Special Purpose p-n Junction Diodes 14.8.2 OPTOELECTRONIC JUNCTION DEVICES 14.9 Digital Electronics and Logic Gates	
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II PUC Physics Practicals: Retained experiments

(Any eight experiments have to be conducted)

1. To determine resistance per unit length of a given wire by plotting a graph of potential difference versus current.
2. To determine the resistance of a given wire using a metre bridge and hence determine the resistivity of the material of the wire.
3. To compare the emf of two given primary cells (Daniel and Leclanche cells) using a potentiometer.
4. To determine the internal resistance of a given primary cell using a potentiometer.
5. To determine the resistance of a galvanometer by half deflection method and to find its figure of merit.
6. To convert the given galvanometer (of known resistance and figure of merit) into (i) an ammeter of a desired range (say 0 to 30 mA) and (ii) a voltmeter of desired range (say 0 to 3 V) and verify the same.
7. To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$.
8. To find the focal length of a concave lens with the help of a convex lens.
9. To determine the angle of minimum deviation for a given glass prism by plotting a graph between the angle of incidence and the angle of deviation.
10. To draw the I - V characteristic curves of a p-n Junction in forward bias and reverse bias.

II PUC Physics Practicals : Deleted experiments

1. To verify the laws of combination of resistances (series and parallel) using of metre bridge.
2. To determine the frequency of alternating current using a sonometer and an electromagnet.
3. To find the value of ' v ' for different values of ' u ' in case of concave mirror and to find the focal length.
4. To find the focal length of convex mirror using a convex lens.
5. To determine refractive index of a glass slab using a travelling microscope.
6. To determine the refractive index of liquid (water) using (i) concave mirror, (ii) convex lens and a plane mirror.
7. To draw the characteristic curve of a zener diode and to determine its reverse breakdown voltage.

To study the characteristics of common emitter n-p-n (or p-n-p) transistor and to find out the values of current and voltage gains.

CHEMISTRY

II PUC

Unit 1 The Solid State

RETAINED PORTION	DELETED PORTION
1.1 General Characteristics of Solid State 1.2 Amorphous and Crystalline Solids 1.3 Classification of Crystalline Solids 1.4 Crystal Lattices and Unit Cells 1.5 Number of Atoms in a Unit Cell 1.6 Close Packed Structures 1.7 Packing Efficiency 1.8 Calculations Involving Unit Cell Dimensions 1.9 Imperfections in Solids	1.10 Electrical properties 1.11 Magnetic properties

Unit 2 Solutions

RETAINED PORTION	DELETED PORTION
2.1 Types of Solutions 2.2 Expressing Concentration of Solutions 2.3 Solubility 2.4 Vapour Pressure of Liquid Solutions 2.5 Ideal and Non-ideal Solutions 2.6 Colligative Properties and Determination of Molar Mass	2.7 Abnormal Molar masses

Unit 3 Electrochemistry

RETAINED PORTION	DELETED PORTION
3.1 Electrochemical Cells 3.3 Nernst Equation 3.4 Conductance of Electrolytic Solutions 3.5 Electrolytic cells and Electrolysis (excluding elementary idea of laws of electrolysis)	3.2 Galvanic Cells 3.6 Batteries; 3.7 Fuel Cells 3.8 Corrosion

Unit 4 Chemical Kinetics

RETAINED PORTION	DELETED PORTION
4.1 Rate of a Chemical Reaction 4.2 Factors Influencing Rate of a Reaction 4.3 Integrated Rate Equations	4.4 Temperature Dependence of the Rate of a Reaction 4.5 Collision theory of chemical reactions.

Unit 5 Surface Chemistry

RETAINED PORTION	DELETED PORTION
5.1 Adsorption 5.3 Colloids 5.4 Classification of Colloids 5.6 Colloids Around Us	5.2 Catalysis 5.5 Emulsions

Unit 6 General Principles and Processes of Isolation of Elements

RETAINED PORTION	DELETED PORTION
Nil	Entire unit

Unit 7 The *p*-Block Elements

RETAINED PORTION	DELETED PORTION
7.1 Group 15 Elements 7.2 Dinitrogen 7.3 Ammonia 7.4 Oxides of Nitrogen (excluding structure) 7.5 Nitric Acid 7.10 Group 16 Elements 7.11 Dioxygen 7.12 Simple Oxides 7.13 Ozone 7.14 Sulphur – Allotropic Forms 7.15 Sulphur Dioxide 7.16 Oxoacids of Sulphur 7.17 Sulphuric Acid: chemical Properties, uses 7.18 Group 17 Elements 7.19 Chlorine 7.20 Hydrogen Chloride 7.21 Oxoacids of Halogens 7.22 Interhalogen Compounds 7.23 Group 18 Elements	7.4 Oxides of Nitrogen (structures) 7.6 Phosphorus - allotropic forms, 7.7 Phosphine; Preparation and properties 7.8 Phosphorous halides 7.9 Oxoacids of Phosphorus. 7.17 Sulphuric Acid: Industrial process of manufacture.

Unit 8 The *d*- and *f*-Block Elements

RETAINED PORTION	DELETED PORTION
8.1 Position in the Periodic Table 8.2 Electronic Configurations of the <i>d</i> -Block Elements 8.3 General Properties of the Transition Elements (<i>d</i> -Block) 8.5 The Lanthanoids: Electronic configuration, oxidation states, lanthanoids contraction, reasons and consequences. 8.6 The Actinoids; Actinoid contraction 8.7 Some Applications of <i>d</i> - and <i>f</i> -Block Elements	8.4 Some important compounds of Transition elements 8.5 The Lanthanoids: Chemical reactivity of lanthanoids. 8.6 Actinoids –Electronic configuration, oxidation states and comparison with lanthanoids.

Unit 9 Coordination Compounds

RETAINED PORTION	DELETED PORTION
9.1 Werner's Theory of Coordination Compounds 9.2 Definitions of Some Important Terms Pertaining to Coordination Compounds 9.3 Nomenclature of Coordination Compounds 9.5 Bonding in Coordination Compounds 9.6 Bonding in Metal Carbonyls 9.7 Stability of coordination compounds	9.4 Isomerism in coordination compounds. 9.8 Importance and Applications of coordination compounds.

Unit 10 Haloalkanes and Haloarenes

RETAINED PORTION	DELETED PORTION
10.1 Classification 10.2 Nomenclature 10.3 Nature of C-X Bond 10.4 Methods of Preparation 10.5 Physical Properties 10.6 Chemical Reactions	10.7 Polyhalogen Compounds

Unit 11 Alcohols, Phenols and Ethers

RETAINED PORTION	DELETED PORTION
11.1 Classification 11.2 Nomenclature 11.3 Structures of Functional Groups 11.4 Alcohols and Phenols 11.6 Ethers	11.5 Some Commercially important Alcohols.

Unit 12 Aldehydes, Ketones and Carboxylic Acid

RETAINED PORTION	DELETED PORTION
12.1 Nomenclature and Structure of Carbonyl Group 12.2 Preparation of Aldehydes and Ketones 12.3 Physical Properties 12.4 Chemical Reactions 12.5 Uses of Aldehydes and Ketones 12.6 Nomenclature and Structure of Carboxyl Group 12.7 Methods of Preparation of Carboxylic Acids 12.8 Physical Properties 12.9 Chemical Reactions 12.10 Uses of Carboxylic Acids	Nil

Unit 13 Amines

RETAINED PORTION	DELETED PORTION
13.1 Structure of Amines	13.7 Method of preparation of Diazonium

13.2 Classification 13.3 Nomenclature 13.4 Preparation of Amines 13.5 Physical Properties 13.6 Chemical Reactions	salts. 13.8 Physical Properties 13.9 Chemical Reactions 13.10 Importance of Diazonium salts in synthesis of Aromatic Compounds.
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Unit 14 Biomolecules

RETAINED PORTION	DELETED PORTION
14.1 Carbohydrates 14.1.1 Classification of Carbohydrates 14.1.2 Monosaccharides 14.1.3 Preparation of Glucose 14.1.4 Structure of Glucose 14.1.5 Cyclic Structure of Glucose 14.1.6 Structure of Fructose 14.2 Proteins 14.5 Nucleic Acids	14.1.7 Disaccharides 14.1.8 Polysaccharides 14.1.9 Importance of carbohydrates. 14.3 Enzymes 14.4 Vitamins and Hormones

Unit 15 Polymers

RETAINED PORTION	DELETED PORTION
Nil	Entire unit is deleted.

Unit 16 Chemistry in Everyday life

RETAINED PORTION	DELETED PORTION
Nil	Entire unit is deleted.

Practical

The following portion to be retained

- 1) **CHROMATOGRAPHY;**
 - a) Separation of pigments present in the leaves (spinach) and flowers (Rose, marigold) by paper chromatography and determination of R_f value of components.
 - b) Separation of the constituents of a mixture of inorganic compounds containing two cations, Pb^{2+} and Cd^{2+} using chromatographic techniques.
- 2) **TITRIMETRIC ANALYSIS ;**
 - a) To determine the concentration / molarity of $KMnO_4$ solution by titrating it against a 0.1 M standard solution of oxalic acid.
 - b) To determine the concentration / molarity of $KMnO_4$ solution by titrating it against standard solution of FAS.
- 3) **SYSTEMATIC QUALITATIVE ANALYSIS ;**
To detect one cation and one anion in the given salt

- 4) TESTS FOR FUNCTIONAL GROUPS IN ORGANIC COMPOUNDS ;
 - Test for unsaturation
 - Test for alcoholic group
 - Test for phenolic group
 - Test for aldehydes and ketones
 - Test for carboxylic acid
 - Test for amino group
- 5) PREPARATION OF INORGANIC-COMPOUNDS ;
 - a) To prepare double salts; FAS and potash alum.
 - b) To prepare potassium trioxalatoferate (III)
- 6) TEST FOR CARBOHYDRATES, FATS AND PROTEINS ;
 - a) Test for carbohydrates
 - b) Test for oils and fats
 - c) Test for proteins
- 7) Reaction between KIO_3 and Na_2SO_3 using starch solution as indicator. (Clock reaction)
- 8) Enthalpy of neutralization of strong acid (HCl) and strong base (NaOH)
- 9) Determination of enthalpy change during interaction between acetone and Chloroform.
- 10) Preparation of Acetanilide.
- 11) Preparation of Di-benzal acetone.

Following portions should be considered deleted.

A. Surface Chemistry

- a. Preparation of one lyophilic and one lyophobic sol Lyophilic sol - starch, egg albumin and gum Lyophobic sol - aluminium hydroxide, ferric hydroxide, arsenous sulphide.
- b. Dialysis of sol-prepared in (a) above.
- c. Study of the role of emulsifying agents in stabilizing the emulsion of different oils.

B. Chemical Kinetics

- a. Effect of concentration and temperature on the rate of reaction between Sodium Thiosulphate and Hydrochloric acid.
- b. Study of reaction rates:
 - i) Reaction of Iodide ion with Hydrogen Peroxide at room temperature using different concentration of Iodide ions.

C. Thermo chemistry Any one of the following experiments

- i) Enthalpy of dissolution of Copper Sulphate or Potassium Nitrate.

D. Electrochemistry Variation of cell potential in $Zn/Zn^{2+} || Cu^{2+}/Cu$ with change in concentration of electrolytes ($CuSO_4$ or $ZnSO_4$) at room temperature.

G. Preparation of Organic Compounds:

- i) P-nitro acetanilide, Aniline yellow or 2-naphthol aniline dye.

MATHEMATICS

II PUC

1. Relations and Functions

RETAINED PORTION	DELETED PORTION
Introduction Types of Relations Types of Functions Binary Operations	Composition functions, inverse of a function.

2. Inverse Trigonometric Functions

RETAINED PORTION	DELETED PORTION
Introduction Basic Concepts Principal values	Graphs of inverse trigonometric functions Elementary properties of inverse trigonometric functions

3. Matrices

RETAINED PORTION	DELETED PORTION
Introduction Matrix Types of Matrices Operations on Matrices Transpose of a Matrix Symmetric and Skew Symmetric Matrices Invertible matrices	Existence of non-zero matrices whose product is the zero matrix. Concept of elementary row and column operations. proof of the uniqueness of inverse, if it exists.

4. Determinants

RETAINED PORTION	DELETED PORTION
Introduction Determinant Area of a Triangle Minors and Cofactors Adjoint and Inverse of a Matrix Applications of Determinants and Matrices	Properties of determinants. Consistency, inconsistency and number of solutions of system of linear equations by examples.

5. Continuity and Differentiability

RETAINED PORTION	DELETED PORTION
Introduction Continuity Differentiability Exponential and Logarithmic Functions Logarithmic Differentiation Derivatives of Functions in Parametric Form Second Order Derivative	Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretation

6. Application of Derivatives

RETAINED PORTION	DELETED PORTION
Introduction Rate of Change of Quantities Increasing and Decreasing Functions Tangents and Normals Maxima and Minima	Rate of change of bodies, use of derivatives in approximation

7. Integrals

RETAINED PORTION	DELETED PORTION
Introduction Integration as an Inverse Process of Differentiation Methods of Integration Integrals of some Particular Functions Integration by Partial Fractions Integration by Parts Definite Integral Fundamental Theorem of Calculus Evaluation of Definite Integrals by Substitution Some Properties of Definite Integrals	$\int \sqrt{ax^2 + bx + c} \cdot dx$ $\int (ax + b) \sqrt{ax^2 + bx + c} \cdot dx$ Definite integral as a limit of a sum

8. Applications of Integrals

RETAINED PORTION	DELETED PORTION
Introduction Area under simple curves	Area between any of the two above said curves

9. Differential Equations

RETAINED PORTION	DELETED PORTION
Introduction Basic Concepts Particular Solutions of a differential Equation Methods of Solving First order, First Degree Differential Equations	Formation of differential equation whose general solution is given. Solutions of linear differential equation of the type: $\frac{dx}{dy} + Px = Q$, where P and Q are functions of y or constants

10. Vector Algebra

RETAINED PORTION	DELETED PORTION
Introduction Some Basic Concepts Types of Vectors Addition of Vectors Multiplication of a Vector by a Scalar Product of Two Vectors	Scalar triple product of vectors.

11. Three Dimensional Geometry

RETAINED PORTION	DELETED PORTION
Introduction Direction Cosines and Direction Ratios of a Line Equation of a Line in Space Shortest Distance between Two Lines Plane Coplanarity of Two Lines Distance of a Point from a Plane	Angle between (i) two lines, (ii) two planes, (iii) a line and a plane

12. Linear Programming

RETAINED PORTION	DELETED PORTION
Introduction Linear Programming Problem and its Mathematical Formulation Different Types of Linear Programming Problems	Mathematical formulation of L.P. problems (unbounded)

13. Probability

RETAINED PORTION	DELETED PORTION
Introduction Conditional Probability Multiplication Theorem on Probability Independent Events Bayes' Theorem.	Mean and variance of random variable. Binomial probability distribution.

BIOLOGY

II PUC

UNIT VI REPRODUCTION

RETAINED PORTION	DELETED PORTION
1 : Reproduction in Organisms 1.2 Sexual reproduction 2 : Sexual Reproduction in Flowering Plants 3 : Human Reproduction 4 : Reproductive Health	Chapter-1: Reproduction in Organism Reproduction, a characteristic feature of all organisms for continuation of species; modes of reproduction - asexual and sexual reproduction; asexual reproduction - binary fission, sporulation, budding, gemmule formation, fragmentation; vegetative propagation in plants

UNIT VII GENETICS AND EVOLUTION

RETAINED PORTION	DELETED PORTION
5 : Principles of Inheritance and Variation 6 : Molecular Basis of Inheritance	Chapter-7: Evolution Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy - Weinberg's principle; adaptive radiation; human evolution.

UNIT VIII BIOLOGY IN HUMAN WELFARE

RETAINED PORTION	DELETED PORTION
Chapter 8 : Human Health and Disease Chapter 10 : Microbes in Human Welfare	Chapter 9: Strategies for Enhancement in Food Production Animal husbandry, Plant breeding, tissue culture, single cell protein

UNIT IX BIOTECHNOLOGY

RETAINED PORTION	DELETED PORTION
Chapter 11 : Biotechnology : Principles and Processes	Nil

UNIT X ECOLOGY

RETAINED PORTION	DELETED PORTION
<p>13 : Organisms and Populations 15 : Biodiversity and Conservation</p>	<p>Chapter-14: Ecosystem Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids-of-number, biomass, energy; nutrient cycles (carbon and phosphorous); ecological succession; ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief).</p> <p>Chapter 16: Environmental Issues Air pollution and its control; water pollution and its control; agrochemicals and their effects; solid waste management; radioactive waste management; greenhouse effect and climate change impact and mitigation; ozone layer depletion; deforestation; exemplifying case study as success story addressing environmental issue(s).</p>

Practical

The following portion to be retained

- Exercise-1 To study the reproductive parts of commonly available flowers
- Exercise-2 To calculate percentage of pollen germination
- Exercise-3 To study study pollen tube growth on stigma
- Exercise-4 To study the discrete stages of gametogenesis in mammalian testis and ovary
- Exercise-5 To study and identify various stages of female gametophyte development in the ovary of a flower
- Exercise-6 Preparation and study of mitosis in onion root tips
- Exercise-7 Study of stages of meiosis using permanent slides
- Exercise-8 To study the blastula stage of embryonic development in mammal, with the help of permanent slide, chart, model or photographs
- Exercise-9 Preparation and analysis of pedigree charts
- Exercise-10 Staining of nucleic acid by acetocarmine
- Exercise-11 To identify common disease-causing organisms and the symptoms of the diseases
- Exercise-12 To study the texture of soil samples
- Exercise-13 To determine water holding capacity of soils
- Exercise-14 To study the ecological adaptations in plants living in xeric and hydric conditions

- Exercise-15 To study the adaptations in animals living in xeric and hydric conditions
- Exercise-16 To determine the pH of different water and soil samples
- Exercise-17 To study turbidity of water samples
- Exercise-18 To analyse living organisms in water samples
- Exercise-19 Study of homologous and analogous organs in plants and animals

DELETED PORTIONS CLASS XII: PRACTICAL

A: List of Experiments

1. Study the presence of suspended particulate matter in air at two widely different sites.
2. Study the plant population density by quadrat method.
3. Study the plant population frequency by quadrat method.

B. Study/Observer of the following (spotting)

1. Pollen germination on stigma through a permanent slide or scanning electron micrograph.
2. Mendelian inheritance using seeds of different colour/sizes of any plant.
3. Controlled pollination - emasculation, tagging and bagging.

CHEMISTRY

II PUC

Unit 1 The Solid State

RETAINED PORTION	DELETED PORTION
1.1 General Characteristics of Solid State 1.2 Amorphous and Crystalline Solids 1.3 Classification of Crystalline Solids 1.4 Crystal Lattices and Unit Cells 1.5 Number of Atoms in a Unit Cell 1.6 Close Packed Structures 1.7 Packing Efficiency 1.8 Calculations Involving Unit Cell Dimensions 1.9 Imperfections in Solids	1.10 Electrical properties 1.11 Magnetic properties

Unit 2 Solutions

RETAINED PORTION	DELETED PORTION
2.1 Types of Solutions 2.2 Expressing Concentration of Solutions 2.3 Solubility 2.4 Vapour Pressure of Liquid Solutions 2.5 Ideal and Non-ideal Solutions 2.6 Colligative Properties and Determination of Molar Mass	2.7 Abnormal Molar masses

Unit 3 Electrochemistry

RETAINED PORTION	DELETED PORTION
3.1 Electrochemical Cells 3.3 Nernst Equation 3.4 Conductance of Electrolytic Solutions 3.5 Electrolytic cells and Electrolysis (excluding elementary idea of laws of electrolysis)	3.2 Galvanic Cells 3.6 Batteries; 3.7 Fuel Cells 3.8 Corrosion

Unit 4 Chemical Kinetics

RETAINED PORTION	DELETED PORTION
4.1 Rate of a Chemical Reaction 4.2 Factors Influencing Rate of a Reaction 4.3 Integrated Rate Equations	4.4 Temperature Dependence of the Rate of a Reaction 4.5 Collision theory of chemical reactions.

Unit 5 Surface Chemistry

RETAINED PORTION	DELETED PORTION
5.1 Adsorption 5.3 Colloids 5.4 Classification of Colloids 5.6 Colloids Around Us	5.2 Catalysis 5.5 Emulsions

Unit 6 General Principles and Processes of Isolation of Elements

RETAINED PORTION	DELETED PORTION
Nil	Entire unit

Unit 7 The *p*-Block Elements

RETAINED PORTION	DELETED PORTION
7.1 Group 15 Elements 7.2 Dinitrogen 7.3 Ammonia 7.4 Oxides of Nitrogen (excluding structure) 7.5 Nitric Acid 7.10 Group 16 Elements 7.11 Dioxygen 7.12 Simple Oxides 7.13 Ozone 7.14 Sulphur – Allotropic Forms 7.15 Sulphur Dioxide 7.16 Oxoacids of Sulphur. 7.17 Sulphuric Acid; chemical Properties, uses 7.18 Group 17 Elements 7.19 Chlorine 7.20 Hydrogen Chloride 7.21 Oxoacids of Halogens 7.22 Interhalogen Compounds 7.23 Group 18 Elements	7.4 Oxides of Nitrogen (structures) 7.6 Phosphorus - allotropic forms, 7.7 Phosphine; Preparation and properties 7.8 Phosphorous halides 7.9 Oxoacids of Phosphorus. 7.17 Sulphuric Acid: Industrial process of manufacture.

Unit 8 The *d*- and *f*-Block Elements

RETAINED PORTION	DELETED PORTION
8.1 Position in the Periodic Table 8.2 Electronic Configurations of the <i>d</i> -Block Elements 8.3 General Properties of the Transition Elements (<i>d</i> -Block) 8.5 The Lanthanoids: Electronic configuration, oxidation states,	8.4 Some important compounds of Transition elements 8.5 The Lanthanoids: Chemical reactivity of lanthanoids. 8.6 Actinoids – Electronic configuration, oxidation states and comparison with lanthanoids.

lanthanoids contraction, reasons and consequences.	
8.6 The Actinoids; Actinoid contraction	
8.7 Some Applications of <i>d</i> - and <i>f</i> -Block Elements	

Unit 9 Coordination Compounds

RETAINED PORTION	DELETED PORTION
9.1 Werner's Theory of Coordination Compounds	9.4 Isomerism in coordination compounds.
9.2 Definitions of Some Important Terms Pertaining to Coordination Compounds	9.8 Importance and Applications of coordination compounds.
9.3 Nomenclature of Coordination Compounds	
9.5 Bonding in Coordination Compounds	
9.6 Bonding in Metal Carbonyls	
9.7 Stability of coordination compounds	

Unit 10 Haloalkanes and Haloarenes

RETAINED PORTION	DELETED PORTION
10.1 Classification	10.7 Polyhalogen Compounds
10.2 Nomenclature	
10.3 Nature of C-X Bond	
10.4 Methods of Preparation	
10.5 Physical Properties	
10.6 Chemical Reactions	

Unit 11 Alcohols, Phenols and Ethers

RETAINED PORTION	DELETED PORTION
11.1 Classification	11.5 Some Commercially important Alcohols.
11.2 Nomenclature	
11.3 Structures of Functional Groups	
11.4 Alcohols and Phenols	
11.6 Ethers	

Unit 12 Aldehydes, Ketones and Carboxylic Acid

RETAINED PORTION	DELETED PORTION
12.1 Nomenclature and Structure of Carbonyl Group	Nil
12.2 Preparation of Aldehydes and Ketones	
12.3 Physical Properties	
12.4 Chemical Reactions	
12.5 Uses of Aldehydes and Ketones	

12.6 Nomenclature and Structure of Carboxyl Group 12.7 Methods of Preparation of Carboxylic Acids 12.8 Physical Properties 12.9 Chemical Reactions 12.10 Uses of Carboxylic Acids	
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Unit 13 Amines

RETAINED PORTION	DELETED PORTION
13.1 Structure of Amines 13.2 Classification 13.3 Nomenclature 13.4 Preparation of Amines 13.5 Physical Properties 13.6 Chemical Reactions	13.7 Method of preparation of Diazonium salts. 13.8 Physical Properties 13.9 Chemical Reactions 13.10 Importance of Diazonium salts in synthesis of Aromatic Compounds.

Unit 14 Biomolecules

RETAINED PORTION	DELETED PORTION
14.1 Carbohydrates 14.1.1 Classification of Carbohydrates 14.1.2 Monosaccharides 14.1.3 Preparation of Glucose 14.1.4 Structure of Glucose 14.1.5 Cyclic Structure of Glucose 14.1.6 Structure of Fructose 14.2 Proteins 14.5 Nucleic Acids	14.1.7 Disaccharides 14.1.8 Polysaccharides 14.1.9 Importance of carbohydrates. 14.3 Enzymes 14.4 Vitamins and Hormones

Unit 15 Polymers

RETAINED PORTION	DELETED PORTION
Nil	Entire unit is deleted.

Unit 16 Chemistry in Everyday life

RETAINED PORTION	DELETED PORTION
Nil	Entire unit is deleted.