ACADEMIC YEAR 2020-2021

30% DELETED CONTENT IN VIEW OF COVID-19 PANDEMIC

INTERMEDIATE 1st YEAR BOTANY SYLLABUS

UNIT	S CHAPTE	R NO DELETED TOPIC
I	1	The living world
	1.3	Taxonomic categories
	1.4	Taxonomic aids
	4	Plant kingdom
	4.5	Angiosperms
П	5	Morphology of flowering plants
	5.1	The Root
	5.2	The Stem
	5.3	The Leaf
	5.6	The Fruit
	5.7	The Seed
Ш	6	Modes of reproduction
	6.1	Reproduction & its types
	6.2	Asexual reproduction
	6.3	Sexual reproduction
IV	8	Plant systematics
	8.3.1	Fabaceae
VI		Internal organisation of plants
	12	Histology and anatomy of flowering plants
	12.1	The tissues
	12.2	The tissues systems
	12.3	Anatomy
	12.3	3.5 Dorsiventral leaf
	12.3	3.6 Isobilateral leaf
	12.4	Secondary growth
VII	13	Ecological adaptation, Succession & Ecological services
	13.3	Plant succession
	13.4	Ecological services

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INTERMEDIATE 1st YEAR BOTANY PRACTICAL SYLLABUS

- 1. Study of modifications of root
- 2. Study of modifications of stem
- 3. Study of modifications of leaf
- 4. Study and description of Family: Fabaceae
- 5. Study of tissues and diversity in shapes and sizes in plant cells

ACADEMIC YEAR 2020-2021

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CHEMISTRY- I Year Syllabus (2020-2021) DELETED

No.	Name of the Chapter	Deleted sub topics		
Chapter-I	Atomic Structure	1.1Sub-atomic particles: (Discovery of Election, proton and Neutron); atomic number, isotopes and isobars.		
		1.2 Atomic Model: Thomson's model and its limitations. Rutherford's model and its limitations		
		1.6 Quantum mechanical model of an atom - shapes of atomic orbitals		
Chapter-II	Classification of Elements and	2.1 Need to classify elements		
	Periodicity in Properties	2.2 Genesis of periodic classification.		
Chapter-III	Chemical Bonding and Molecular Structure	Nil		
Chapter-IV	States of Matter: Gases and Liquids	4.10 Distribution of molecular speeds – rms, average and most probable speedskinetic energy of gas molecules		
		4.12 Liquefaction of gases		
		4.13 Liquid state – properties of liquids in terms of intermolecular interactions-vapour pressure, surface tension and viscosity (Qualitative idea only. No mathematical derivation)		
Chapter-V	Stoichiometry	5.2 Laws of chemical combinations, Gay Lussac's law of gaseous volumes, Dalton's atomic theory, Avogadro law 5.6 methods of expressing concentration of solutions		
		5.11 redox reactions in titrimetry.(Applications of redox reactions)		

Chapter-VI	Thermodynamics	6.2.4 Heat capacity and specific heat	
Chapter-v1	Thermodynamics	capacity	
		6.7 Criteria for equilibrium	
Chapter-VII	Chemical Equilibrium and Acids and Bases	7.7 Relationship between equilibrium constant K, reaction quotient Q and Gibbs energy G7.11Ionisation of acids and bases	
		7.12 Henderson equation derivation	
Chapter-VIII	Hydrogen and its Compounds	8.3 Preparation of dihydrogen	
		8.4 Properties of dihydrogen	
		8.7 Hydrogen peroxide preparation and properties, structure and use)	
Chapter-IX	s-Block Elements: Alkali and Alkaline Earth Metals	9.4 Some important compounds of sodium:sodiumcarbonate; sodium chloride; sodium hydroxide; sodium hydrogen carbonate	
		9.5 Biological importance of sodium and potassium Group 2 elements	
		9.9 Some important compounds of calcium	
		9.10 Biological importance of magnesium and Calcium.	
Chapter-X	p-Block Elements : Group-13 Boron Family	10.3 Important compounds of boron – borax, orthoboric acid, diboran	
		10.4 Uses of boron, aluminium and their compound.	
Chapter-XI	p-Block Elements : Group-14 Carbon Family	11.4 Some important compounds of carbon and silicon, carbon monoxide, carbon dioxide, silicones, silicates and zeolites.	
Chapter-XII	Environmental Chemistry	ENTIRE CHAPTER DELETED	
Chapter-XIII	Organic Chemistry : Some Basic Principles and Techniques	13.8 Methods of purification of organic compounds	
	Hydrocarbons	13.9 Qualitative elemental analysis of organic compounds	
		13.10 Quantitative elemental analysis of organic compounds.	
		Note: Free radical mechanism of halogenations, combustion and pyrolysis	

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INTERMEDIATE 1st YEAR MATHEMATICS (IA) SYLLABUS

S.NO	CHAPTER	TOPICS	no of periods	REMARKS
1	1. Functions	1.2 Deleted	8	
2	2. Mathematical Induction	complete chapter	8	
3	3. Matrices	3.4.8: Properties of Determinants related Problems and Examples 3.6: Consistency and inconsistency of system of simultaneous equations 3.7: Solutions of simultaneous linear equations Gauss-Jordan Method 3.7.7 onwards	14	
4	5. Product of vectors	5.11 onwards	8	
5	7. Trigonometric Equations	complete chapter	5	
6	8. Inverse Trigonometric Functions	complete chapter	5	
7	9. Hyperbolic functions	Inverse Hyperbolic functions		
	TOTAL		45	

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INTERMEDIATE 1st YEAR MATHEMATICS (IB) SYLLABUS

S.NO	CHAPTER	TOPICS	no of periods	REMARKS
1	4. Pair of straight lines	4.3: Pair of bisectors of angles and related problems 4.5: Condition of pair of parallel lines and distance between them and point of intersection of pair of lines Exercise 4(b): Deleted	12	
2	7. Plane	Exercise 7(a) Section II & III Related examples	4	
3	8. Limits and Continuity	8.4: continuity	6	
4	9. Differentiation	9.3: Problems of inverse trigonometric functions Exercise 9(c) Section III Deleted Exercise 9(d) Deleted	8	
5	10. Applications of Derivatives	10.6: Derivative as a rate of change, 10.7: Roles, lagranges, mean value theorems, 10.8: Increasing and decreasing functions, and related Problems and Examples	13	
	TOTAL		45	

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INTERMEDIATE 1st YEAR PHYSICS SYLLABUS

CHAPTER - I: PHYSICAL WORLD

- 1.2 Scope and Excitement of Physics.
- 1.3 Physics Technology and Society
- 1.5 Nature of Physical Laws

CHAPTER -II: UNITS AND MEASUREMENTS

No Deletions

Chapter-III: MOTION IN A STRAIGHT LINE

No Deletions

CHAPTER -IV: MOTION IN A PLANE

No Deletions

CHAPTER-V: LAWS OF MOTION

- 5.2 Aristotle's fallacy
- 5.3 The law of inertia
- 5.4 Newton's first law of motion
- 5.5 Newton's second law of motion
- 5.6 Newton's third law of motion

(These topics are deleted, however they must be recapitulated as a pre-requisite to deal with the remaining topics of the chapter.)

CHAPTER - VI: WORK, ENERGY AND POWER

No Deletions

CHAPTER-VII: SYSTEM OF PARTICLES AND ROTATIONAL MOTION

7.10 Theorems of perpendicular and parallel axes.

Chapter VIII: OSCILLATIONS

No Deletions

CHAPTER -IX: GRAVITATION

- 9.2 Kepler's laws
- 9.4 The Gravitational Constant (despite the topic is deleted, the value of G should be mentioned to the student)
- 9.5 Acceleration due to gravity of earth

CHAPTER -X: MECHANICAL PROPERTIES OF SOLIDS

- 10.6.2 Determination of Young's Modulus of the material of a wire.
- 10.6.3 Shear modulus
- 10.6.5 Poisson's ratio
- 10.6.6 Elastic potential energy in a stretched wire
- 10. 7 Applications of elastic behavior of materials

CHAPTER - XI: MECHANICAL PROPERTIES OF FLUIDS

No Deletions

CHAPTER - XII: THERMAL PROPERTIES OF MATTER

- 12.9 Heat Transfer
- 12.9.1 Conduction
- 12.9.2 Convection
- 12.9.3 Radiation

(These topics are deleted, however they must be recapitulated as a pre-requisite to deal with the remaining topics of the chapter.)

CHAPTER – XIII: THERMODYNAMICS

- 13.9 Heat engines
- 13.10 Refrigerator and heat pumps
- 13.13 Carnot engine

CHAPTER – XIV: KINETIC THEORY

No Deletions

Deleted Experiments of First Year Practicals

- 1. Physical balance
- 2. Surface tension
- 3. Apparent expansion of liquids

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INTERMEDIATE 1st YEAR PHYSICS PRACTICAL SYLLABUS

No Deletions

Deleted Experiments of First Year Practicals

- 1. Physical balance
- 2. Surface tension
- 3. Apparent expansion of liquids

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INTERMEDIATE 1st YEAR ZOOLOGY SYLLABUS

UNIT- I: ZOOLOGY - Diversity of Living World

- 1.4 Need for classification- Zoos as tools for the study of taxonomy
- 1.5 Biological Classification: Biological system of classification- (Phylogenetic classification only)

UNIT- V: LOCOMOTION & REPRODUCTION INPROTOZOA

- 5.1. Locomotion: Definition, types of locomotor structures pseudopodia (basic idea of pseudopodia without going into different types), flagella & cilia (Brief account giving two examples each)
- 5.2. Flagellar & Ciliary movement Effective & Recovery strokes in Euglena, Synchronal & Metachronal movements in Paramecium.
- 5.3. Asexual Reproduction.
- 5.4. Sexual Reproduction.

UNIT- VII: TYPE STUDY OF PERIPLANETA AMERICANA

- 7.1. Habitat and habits
- 7.2. External features
- 7.3. Locomotion
- 7.4. Digestive system
- 7.5. Respiratory system
- 7.6. Circulatory system
- 7.7. Excretory system
- 7.8. Nervous system sense organs, structure of Ommatidium.
- 7.9. Reproductive system

UNIT- VIII: ECOLOGY & ENVIRONMENT

- 8.4 Ecosystems and their components
 - 8.4.1. The Natural Ecosystems:
 - 8.4.2. Aquatic Ecosystem
 - 8.4.3. Lake Ecosystem
 - 8.4.4. Terrestial Ecosystem
- 8.5.3. Energy Flow
- 8.5.4. Productivity
- 8.5.5. Ecological Pyramids
- 8.6. Nutrient cycles Carbon, Phosphorous cycles (Brief account)
- 8.8. Environmental issues.

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INTERMEDIATE 1st YEAR ZOOLOGY PRACTICAL SYLLABUS

II.	Study of Invertebrate slides and identification with giving Classification and reasons
	4. Cockroach – Mouth Parts
	5. Cockroach – Digestive System
	6. Cockroach – Nervous System