



TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

PARENT SYLLABUS

Class XII 2023 -2024

Science

MONTH	English	Math	Physics	Chemistry	Biology
April and May	<p>April Writing Skills: Job Application, Notice writing, Article writing,</p> <p>Prose: The Last Lesson, The Third Level Lost Spring,</p> <p>Poetry: My Mother at Sixty-six, A Thing of Beauty</p> <p>Art Integrated Activity: Create a set of two quotes or design a poster related to child</p>	<p>April Topic: Matrices and Determinants (Revision) Subtopics:- Symmetric and Skew Symmetric matrices. -Adjoint and inverse of a matrix. -Solving system of equations using matrix method</p> <p>Topic: *Continuity and Differentiability</p> <p>Subtopics: -Continuity of a function -Chain Rule</p>	<p>April Topic: Electric Field and Charges</p> <p>Subtopics: *Electric Charges, Conservation of charge, Coulomb's law-force between two-point charges, forces between multiple charges.</p> <p>*Superposition principle and continuous charge distribution,</p> <p>* Electric field, electric field due to a point charge</p>	<p>April Topic: Solutions Subtopics: -Types of solutions -Expression of concentration of solutions of solids in liquids -Solubility of gases in liquids, solid solutions, Raoult's law -Colligative Properties -Determination of molecular masses using colligative properties -Abnormal molecular mass and Vant Hoff Factor.</p> <p>Topic: Haloalkanes and Haloarenes Sub Topics: -Haloalkanes: Nomenclature, nature of C-X bond, physical and chemical properties, -optical rotation -mechanism of</p>	<p>April Topic: Human Reproduction Subtopics: - Gametogenesis -Menstrual cycle -Fertilization and Implantation -Pregnancy and embryonic development -Parturition and Lactation Activities: -Preparation of a temporary mount to observe pollen</p>

<p>labour, on Pinterest</p> <p>Or</p> <p>Imagine that you are going to interview a renowned social reformer of your country, who has been working for the upliftment of child labourers in India. Frame a set of ten questions that you plan to ask him/her</p> <p><u>Life skills:</u> Critical thinking</p> <p><u>Values :</u></p> <p>Effective Communication, Being responsible</p> <p><u>Gender sensitivity:</u></p> <p>Gender Sensitivity at Workplaces</p>	<p>-Differentiability. -Inverse trigonometric function Derivatives. -Logarithmic Differentiation -Parametric Differentiation -Higher order Derivatives</p> <p>Topic: *Application of Derivatives</p> <p>Subtopics: -Derivative as a rate measure -Increasing and decreasing function -Maxima and Minima</p> <p><u>May</u></p> <p>Topic: *Application of Derivatives</p> <p>Subtopics: -Maxima and</p>	<p>* Electric field lines, electric dipole, electric field due to a dipole.*Torque on a dipole in uniform electric field, Potential Energy of a dipole in an external electric field</p> <p>*Electric Flux, Gauss's Theorem, Applications of Gauss's Theorem (field due to infinitely long straight charged wire and plane sheet of charge)</p> <p>Topic: Electric Potential and Capacitance</p> <p>Subtopics:*Electric potential, potential difference, electric potential due to a point charge.</p> <p>*Electric potential due to a point charge, a dipole and system of charges; equipotential</p>	<p>substitution reactions. - Haloarenes: Nature of C-X bond, substitution reactions -Directive influence of halogen in monosubstituted compounds only -Uses and environmental effects of - polyhalogenated compounds</p> <p>Activities:</p> <p>-Study of the application of reverse osmosis in water purifiers.</p> <p>-Chirality check for halogenated compounds- using 3-D models</p> <p>Art Integration Activity (Poster/ Comic strip)Topic: - Comparison of the reactivity of different types of alkyl halides towards S_N2 and S_N1 mechanism.</p> <p>Lab Activity:</p> <p>-Determine the molarity and strength of the given $KMnO_4$ solution by titrating it against M/40 Mohr's Salt solution. You are required to prepare 25 ml of M/40 Mohr Salt solution.</p> <p>-Determine the percentage purity of the given sample of $KMnO_4$ by using titration between Mohr salt</p>	<p>germination -Pollen germination on stigma through a permanent slide or scanning electron micrograph.</p> <p>Topic: Reproductive Health Subtopics: - Reproductive health-problems and strategies -Population explosion and birth control -Medical termination of pregnancy -Sexually transmitted diseases -Infertility</p> <p>Art Integration 'Poster/Flyer' Students will design a flyer/poster to create awareness on</p>
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<p><u>Health and wellness:</u> Intellectual and social health</p> <p>SEWA: Taking care of the elderly and community upliftment</p> <p><u>May:</u></p> <p>Writing Skills: Letter to the Editor</p> <p>Prose: Deep Water, Tiger King</p> <p>Poetry: Keeping Quiet</p> <p>Art integrated activity</p> <p>Role Play:</p> <p>Create a set of dialogues with four exchanges between</p>	<p>Minima</p> <p>Topic: *Integrals</p> <p>Subtopics:</p> <p>-Integration by substitution.</p> <p>-Integration of Trigonometric function.</p> <p>-Standard Integrals</p> <p>-By parts</p> <p>-Partial Fraction</p> <p>Art Integration Activity- Funnier side of exponential and logarithmic function</p> <p>Activities :</p> <p>1) To understand the concepts of max and min values of a function in a</p>	<p>surfaces</p> <p>*Electrical potential energy of a system of two-point charges and of electric dipole in an electrostatic field. Conductors and insulators.</p> <p>*Dielectrics, Electric polarisation, Capacitors and Capacitance.</p> <p>Activities: *Connect with real life: * Electrostatic Shielding. *Working of ECG and EEG machines based on measurement of potential difference. * Working of Microwave Oven. *Lab Activity:-To find the resistivity of two/three wires by plotting a graph between current and potential difference.</p>	<p>solution and KMnO_4.</p> <p>Life Skill:Problem solving</p> <p>Value:Responsibility and awareness Gender sensitivity:</p> <p>Gender and society</p> <p>Health and wellness:Health, Diet and nutrition</p> <p><u>May</u> <u>Topic:</u> Alcohols, Phenols and Ethers</p> <p>Subtopics:</p> <p>-Alcohols: Nomenclature, methods of preparation, physical and chemical properties of primary alcohols -Identification of primary, secondary and tertiary alcohols -Mechanism of dehydration -Uses with special reference to methanol and ethanol Phenols: Nomenclature, methods of preparation, physical and chemical properties -Acidic nature of phenol, Electrophillic substitution reactions -Uses of phenols. -Ethers: Nomenclature, methods of preparation, physical and chemical properties and uses.</p>	<p>“Reproductive Health”</p> <p>Activities:</p> <p>-Flowers adapted to pollination by different agencies (wind, insects, birds) -Controlled pollination - emasculation, tagging and bagging.</p> <p>Topic: Principles of Inheritance and Variation</p> <p>Subtopics:</p> <p>-Mendel’s Laws of Inheritance - Inheritance of One Gene -Test Cross - Incomplete Dominance - Codominance</p> <p>Activities:</p> <p>-</p>
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<p>William Douglas and his instructor discussing Douglas' fear of water and the instructor's help in removing the fear from his life. Play roles</p> <p>Life Skills: coping with stress, managing emotions and problem solving</p> <p>Values: perseverance, determination</p> <p>General Awareness: awareness about bullying</p> <p>Sewa: community upliftment</p> <p>Health and wellness: mental fitness</p> <p>Gender sensitivity:</p>	<p>closed interval</p> <p>2) To understand the concepts of local maxima, local minima and point of inflection</p> <p>3)Construction of an open box of maximum volume from a given rectangular sheet by cutting equal square pieces from each corner</p> <p>Life Skill:Critical Thinking,Problem Solving</p> <p>Values- Responsibility</p> <p>Gender Sensitivity- Gender Equality awareness</p> <p>Health and Wellness- Emotional Balance</p>	<p>-To find the unknown resistance of a given wire using a meter bridge.</p> <p>Topic: Current Electricity</p> <p>Subtopics:*Electric current, flow of electric charges in a metallic conductor.</p> <p>*Drift velocity, mobility, and their relation with electric current.</p> <p>*Ohm's law, electrical resistance, V-I characteristics (linear and non-linear)</p> <p>*Electrical resistivity and conductivity.</p> <p>Life Skill:Critical Thinking,Problem Solving</p> <p>Value:Curiosity and Optimism</p>	<p>Topic: Biomolecules Subtopics: -Carbohydrates -Classification,monosaccharides - Glucose and fructose structures,, -D-L configuration - Oligosaccharides and polysaccharides -Importance of carbohydrates - Proteins Classification of amino acids, peptide bond, polypeptides, proteins -Structure of proteins - Denaturation of proteins -Vitamins - Classification and functions. -Nucleic Acids: DNA and RNA</p> <p>Topic: Electrochemistry Subtopics: -Redox reactions, - Electrochemical & electrolytic cells -Electrode potential and its measurement -EMF of a cell, standard electrode potential -Electrochemical series and its applications -Nernst equation & related derivations and numerical</p>	<p>Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/ mice) -T.S. of blastula through permanent slides (Mammalian)</p> <p>Life Skill: Building healthy relationship Value: Building up a socially responsible and reproductively healthy society Gender Sensitivity: Respecting the role and</p>
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<p>sensitivity towards all</p>	<p>General Awareness- Time management - Equity and Equality</p> <p>Term-I Weekly test 04.05.2023</p> <p>Syllabus: Matrices, Determinants, Continuity and Differentiability (Only Differentiation will be tested from Continuity and Differentiability)</p>	<p>Health and Wellness: Magic of Exercises.</p> <p>Gender Sensitivity: Gender Equality.</p> <p><u>MAY</u></p> <p>Topic: Current Electricity(contd)</p> <p>Subtopics: Electrical energy and power, Emf and potential difference and internal resistance of cell.</p> <p>Cells in series and parallel, Kirchhoff's laws and simple applications,</p> <p>Wheatstone bridge, meter bridge.</p> <p>Topic: Moving Charges and Magnetism</p> <p>Subtopics:</p>	<p>Activities: Construct an electrochemical cell using different electrodes and fruits / vegetables and compare the cell output.</p> <p>Lab Activity: -Determine the strength of the given KMnO_4 solution by titrating it against M/40 Oxalic acid solution.</p> <p>-Determine the percentage purity of the given sample of KMnO_4 by using titration between oxalic acid and KMnO_4.</p> <p>Life Skills: Critical Thinking</p> <p>Values: Fostering Respect For Differences</p> <p>Gender sensitivity: Gender Awareness</p> <p>Health and wellness: Meditation and health</p> <p>Weekly Test I (12.05.23)</p>	<p>significance of both the genders Health and wellness: Reproductive health</p> <p><u>MAY</u></p> <p>Topic: Principles of Inheritance and Variation (contd.)</p> <p>Subtopics: -Inheritance of Two Genes - Chromosomal theory of inheritance -Linkage and Recombination -Sex Determination -Mutation -Pedigree Analysis -Genetic disorders</p> <p>Activities: -</p>
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			<p>current sensitivity and conversion to ammeter and voltmeter.</p> <p>Activities:</p> <p>*Research on Role of magnetism in ground control of artificial satellites.</p> <p>*Lab Activity:</p> <p>-To determine the resistance of a galvanometer by half deflection method.</p> <p>-To determine the frequency of ac using a sonometer.</p> <p>*Art Integration:</p> <p>Comic Strip design on conversation between electric field intensity and magnetic flux density.</p> <p>Life Skill: Web of relationship, Critical</p>	<p>-Replication -Transcription Activities: -Prepare a temporary mount of onion root tip to study mitosis. -Meiosis in onion bud cell or grasshopper testis through permanent slides</p> <p>Life Skill: Problem solving Value: Concern for life Gender Sensitivity: Genes influence gender identity Health and wellness: Genetic disorders</p> <p>Term-I Weekly test - 19.05.23 -Sexual</p>
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		<p>thinking</p> <p>Value:Honesty and Integrity.</p> <p>Health and Wellness:Magic of Meditation</p> <p>Gender Sensitivity:Gender Bias</p> <p>Weekly Test 1 (26.5.23) Syllabus *Electric Charges and Fields. *Electric Potential and Capacitance *Current Electricity.</p>		<p>Reproduction in Flowering Plants -Human Reproduction</p>
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MONTH	Computer science	Economics	Psychology	Ped.
<p align="center">April and May</p>	<p>April Class XI revision tour (2 days) Syntaxes-loops, if...else Revision Class XI- Functions Lists, Tuples, Dictionaries, Strings- functions and applications-</p> <p>File handling: Text Files-(5 days) open and close a file, read, write, and append to a file, standard input, output, and error streams, relative and absolute paths. open() with open() close() read() readlines() readline()</p> <p>Binary Files- (10 days)</p>	<p>April New Economic policy 1991 Liberalisation Privatisation Globalisation Reasons for adoption of the New Economic Policy</p> <p>Government budget</p> <p>Receipts Expenditure Deficits Objectives</p> <p>May National Income Accounting Income method Output method Expenditure method GDP and</p>	<p>April Chapter: Variations in Psychological Attributes</p> <p>-Individual Differences in Human Functioning</p> <p>-Assessment of Psychological Attributes -Intelligence Theories of Intelligence - Theory of Multiple Intelligences - Triarchic Theory of Intelligence - Planning, Attention- arousal, and Simultaneous- successive Model of Intelligence -Individual Differences in Intelligence -Culture and Intelligence -Emotional Intelligence -Special Abilities -Aptitude : Nature and Measurement -Creativity</p> <p>Health and Wellness: Exercise and yoga</p>	<p>April <u>Unit I - Management of Sporting Events</u> Functions of Sports Events Management (Planning, Organising, Staffing, Directing & Controlling)</p> <p>Various Committees & their Responsibilities (pre; during & post)</p> <p>Fixtures and its Procedures – Knock- Out (Bye & Seeding) & League (Staircase & Cyclic)</p> <p>Intramurals and Extramurals</p> <p>Community Sports</p> <p><u>Unit II - Children & Women in Sports</u></p> <p>Common Postural Deformities - Knock Knee; Bow Legs; Flat Foot; Round Shoulders; Lordosis, Kyphosis, and Scoliosis and their corrective measures</p> <p>Women participation in Sports</p>

	<p>Basic operations on a binary file: Open (filename – absolute or relative path, mode) / Close a binary file, Pickle Module – methods load and dump; Read, Write/Create, Search, Append and Update operations in a binary file.</p> <p>Basic operations on a binary file: Open (filename – absolute or relative path, mode) / Close a binary file, Pickle Module – methods load and dump; Read, Write/Create, Search, Append and Update operations in a</p> <p>Values- Collaboration and Team Spirit</p> <p>Gender Sensitivity- Right to equality</p> <p>Health & wellness:- Right posture in front of Computer</p> <p>Life Skills- Problem Solving Skills,</p>	<p>welfare</p> <p>Values</p> <p>To create awareness of the drawbacks and bring about change.</p> <p>Life skills</p> <p>Problem solving</p> <p>Critical thinking</p> <p>Gender Sensitivity</p> <p>Acceptance of a new model with equal rights</p>	<p>LS: Pro-social behaviour</p> <p>Value: Empathy</p> <p>Gender sensitivity: Discrimination practices among gender roles.</p> <p>Activity: Finding out the relationship between creativity and intelligence by using an IQ test and a rating scale for creativity</p> <p>May</p> <p>Chapter: Self and Personality</p> <p>-Concept of self Cognitive and behavioural aspects of self</p> <p>-Self-esteem</p> <p>-Self-efficacy</p> <p>-Self-regulation</p>	<p>Special consideration (Menarche & Menstrual Dysfunction)</p> <p>Female Athletes Triad (Osteoporosis, Amenorrhea, Eating Disorders)</p> <p>May</p> <p><u>Unit III - Yoga as Preventive Measure for Lifestyle Disease</u></p> <p>Obesity: Procedure, Benefits & Contraindications for <i>Tadasana, Katichakrasana, Pavanmuktasana, Matsayasana, Halasana, Pachimottansana, Ardha – Matsyendrasana, Dhanurasana, Ushtrasana, Suryabedhan pranayama</i></p> <p>Diabetes: Procedure, Benefits & Contraindications for <i>Katichakrasana, Pavanmuktasana, Bhujangasana, Shalabhasana, Dhanurasana, Supta-vajarasana, Paschimottanasana, Ardha-Mastendrasana, Mandukasana, Gomukasana,</i></p>
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	<p>Decision-making skills, Critical Thinking</p> <p>May Class XI Revision Tour-</p> <p>Project work Discussion</p> <p>Unit III: Database - Management:- (11 days) Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(), fetchall(), rowcount, creating database connectivity application</p> <p>Values- Say no to Bullying</p> <p>Gender Sensitivity- Respect opposite gender in the team</p> <p>Life Skills- Communication Skills</p>		<p>-Culture and Self</p> <p>-Concept of Personality</p> <p>-Major approaches to the study of personality</p> <p>- Type Approaches</p> <p>- Trait Approaches</p> <p>-Psychodynamic Approach</p> <p>-Behavioural Approach</p> <p>-Cultural Approach</p> <p>-Humanistic Approach</p> <p>-Assessment of Personality</p> <p>Health and Wellness: Meditation</p> <p>Value: Integrity</p> <p>LS: Self care</p> <p>Gender sensitivity: Women contribution in formulation of personality theories.</p>	<p><i>Yogmudra, Ushtrasana, Kapalabhati</i></p> <p>Asthma: Procedure, Benefits & Contraindications for <i>Tadasana,</i> <i>Urdhwahastottansana,</i> <i>UttanMandukasana, Bhujangasana,</i> <i>Dhanurasana, Ushtrasana,</i> <i>Vakrasana, Kapalabhati,</i> <i>Gomukhasana Matsyaasana,</i> <i>Anuloma-Viloma</i></p> <p>Hypertension: Procedure, Benefits & Contraindications for <i>Tadasana,</i> <i>Katichakransan, Uttanpadasana,</i> <i>Ardha Halasana, Sarala Matyasana,</i> <i>Gomukhasana, UttanMandukasana,</i> <i>Vakrasana, Bhujangasana,</i> <i>Makarasana, Shavasana,</i> <i>Nadishodhanapranayam,</i> <i>Sitlipranayam</i></p> <p>Back pain/Arthritis</p>
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	Problem Solving Skills Decision-making skills Critical Thinking		Activity: Collage on different approaches of personality	
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