

DELHI PUBLIC SCHOOL, GANDHINAGAR
SYLLABUS 2022 – 23
CLASS XII - SCIENCE

Subject: English

MONTH	MAIN COURSE BOOK (FLAMINGO)	SUPPLEMENTARY READER(VISTAS)	ADVANCED WRITING SKILLS/ ACTIVITY
MARCH & APRIL	1. The Last Lesson (Prose) 2. My Mother at Sixty Six (Poem)	1.The Third Level	1. Notice Writing 2.Letter to Editor
MAY	1.Keeping Quiet (Poem)	-----	
JUNE	1 Lost Spring (Prose).	1.The Tiger King	1.Article Writing
JULY	1.Deep Water	1.The Enemy 2. Journey to the End of the Earth	1.Job Application
Syllabus for Periodic Test I- Flamingo : The Last Lesson, Lost Spring, Deep Water, Keeping Quiet(P), My Mother at Sixty- Six (P) Vistas: The Third Level, The Tiger King Writing Skills: 1. Notice Writing, Letter to Editor, Article Writing			
AUGUST	1.Rattrap 2. A Thing of Beauty (Poem).	1. Journey to the End of the Earth (Contd.)	1. Invitations ASL
SEPTEMBER	1.Indigo 2.Poets and Pancakes		ASL
Syllabus for Half-Yearly- Flamingo: The Last Lesson, Lost Spring, Deep Water, Rattrap, Keeping Quiet(P), My Mother at 66 (P), A Thing of Beauty (P) Vistas: The Third Level, The Tiger King, The Enemy, Journey to the End of the Earth WRITING SKILLS- Notice Writing, Letter to Editor, Article Writing, Invitation PRACTICAL – ASL			
OCTOBER	1. The Interview 2. Aunt Jennifer’s Tigers (Poem)		1.Replies to Invitation Project Discussion
NOVEMBER	1.A Roadside Stand 2.Going Places	1. On the Face of it 2.Memories of Childhood	Report Writing
DECEMBER	REVISION		
Syllabus for Pre Board : Complete Syllabus			
Viva			

Subject: Physics

MONTH	LESSONS	ACTIVITIES/PRACTICALS
APRIL-MAY	L1: Electric charges and fields. L2: Electrostatic potential and capacitance	A-1: To determine resistivity of two / three wires by plotting a graph for potential difference versus current.
JUNE	L3: Current Electricity	A-2: To find resistance of a given wire / standard resistor using meter bridge. Act-1: To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
JULY	L4: Moving charges and magnetism L5: Magnetism and matter	A-3: To determine resistance of a galvanometer by half-deflection method and to find its figure of merit. Act-2: To assemble the components of a given electrical circuit.
Syllabus for Periodic Test 1 - L1, L2 and L3		
AUGUST	L5: Magnetism and matter L6: Electromagnetic Induction L7: Alternating current	A-4: To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same. Act-3: To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.
SEPTEMBER	L8: Electromagnetic waves L9: Ray optics and optical Instruments	B-1: To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$. B-2: To determine refractive index of a glass slab using a travelling microscope.
Syllabus for Half Yearly Examination - L1, L2, L3, L4, L5, L6, L7 and L8		
OCTOBER	L9: Ray optics and optical Instruments(cont.) L10: Wave optics L11: Dual nature of radiation and matter	B-3: To draw the I-V characteristic curve for a p-n junction diode in forward bias and reverse bias. Act-4: To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items. B-4: To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
NOVEMBER	L12: Atoms L13: Nuclei L14: Semiconductor electronics	Act-5: To observe refraction and lateral deviation of beam of light through glass slab. Act-6: To observe diffraction of light due to a thin slit.
DECEMBER	REVISION	Completion of Journal
Syllabus for Pre-Board – Full syllabus		

Subject: Chemistry

MONTH	LESSONS	PRACTICALS
MARCH	L:02 Solutions	-
APRIL	L:02 Solutions L:03 Electrochemistry	01. Preparation of 250 ml M/20 solution of Mohr's solution. Determination of molarity and strength of KMnO_4 solution using Mohr's salt. 02. Preparation of 250 ml M/20 solution of Mohr's solution. Determine the percentage purity of KMnO_4 solution using Mohr's salt.
MAY	L:03 Electrochemistry	03. Determination of water of crystallization in Mohr's salt by using 0.011M KMnO_4 solution.
JUNE	L:04 Chemical Kinetics	04. Preparation of 250 ml M/50 solution of Oxalic acid solution. Determination of molarity and strength of KMnO_4 solution using Oxalic acid solution. 05. Find out the percentage purity of impure sample of oxalic acid. You are provided M/100 KMnO_4 solution. 06. Inorganic salt analysis: $[\text{Pb}(\text{NO}_3)_2, \text{NH}_4\text{Br}]$
JULY	L:08 d and f-Block Elements	07. Inorganic salt analysis: $[\text{CaCl}_2, \text{Sr}(\text{NO}_3)_2, \text{BaCl}_2]$ 08. Inorganic salt analysis: $[(\text{CH}_3\text{COO})_2\text{Pb}, (\text{NH}_4)_2\text{CO}_3, \text{CuSO}_4]$
Syllabus for Periodic Test -1: (L:02 Solutions, L:03 Electrochemistry, L:04 Chemical Kinetics)		
AUGUST	L:09 Coordination Compounds L:10 Haloalkanes & Haloarenes	09. Inorganic salt analysis: $[(\text{NH}_4)_3\text{PO}_4, \text{MgSO}_4]$ 10. Inorganic salt analysis: $[\text{Al}_2(\text{SO}_4)_3, \text{ZnCl}_2]$ 11. Organic functional group analysis: [Aldehyde, Ketone]
Syllabus for Half Yearly: (L:02, 03, 04, 08, 09, 10)		
SEPTEMBER	L:11 Alcohols, Phenols & Ethers	12. Organic functional group analysis: [Alcohol, Phenol] 13. Organic functional group analysis: [Carboxylic acid, Aromatic amine]
OCTOBER	L:12 Aldehydes, Ketones & Carboxylic acids	14. Effect of concentration on rate of reaction. 15. Effect of temperature on rate of reaction.
NOVEMBER	L:13 Organic Compounds containing Nitrogen L:14 Biomolecules	16. Preparation of Starch, $\text{Fe}(\text{OH})_3$ and Demonstration of Electrochemical cell. Revision and Completion of Journal
Syllabus for Pre-Board I: (L:02, 03, 04, 08, 09, 10, 11, 12, 13, 14)		

Subject: Biology

MONTH	LESSONS	PRACTICALS
MARCH	Ch 1: Reproduction in organisms (omitted as per syllabus of 2022-23)	
APRIL	Ch 2: Sexual Reproduction in Flowering Plants Ch 3: Human Reproduction	1. Prepare a temporary mount to observe pollen germination. 2. Study the plant population density by quadrat method.

		3. Study the plant population frequency by quadrat method.
MAY	Ch 3: Human Reproduction	4. Controlled pollination - emasculation, tagging and bagging
JUNE	Ch 4: Reproductive health Ch 5: Principles of inheritance and variation	5. Prepare a temporary mount of onion root tip to study mitosis. 6. Flowers adapted to pollination by different agencies (wind, insects, and birds). 7. Pollen germination on stigma through a permanent slide or scanning electron micrograph
JULY	Ch 5: Principles of inheritance and variation Ch 6: Molecular basis of inheritance	8. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc. 9. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice). 10. T.S. of blastula through permanent slides (Mammalian).
Syllabus for Periodic Test -1: Ch 2, 3, 4		
AUGUST	Ch 6: Molecular basis of inheritance Ch 7: Evolution Ch 8: Human health and disease	11. Meiosis in onion bud cell or grasshopper testis through permanent slides. 12. Mendelian inheritance using seeds of different colour/sizes of any plant. 13. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness.
Syllabus for Half Yearly: Ch 2, 3, 4, 5, 6, 7		
SEPTEMBER	Ch 8: Human health and disease Ch 10: Microbes in human welfare	14. Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause.
OCTOBER	Ch 10: Microbes in human welfare Ch 11: Biotechnology: Principles and processes	15. Models specimen showing symbolic association in root modules of leguminous plants, Cuscuta on host, lichens. 16. Flash cards models showing examples of homologous and analogous organs.
NOVEMBER	Ch 12: Biotechnology and its applications Ch 13: Organisms and Populations Ch 14: Ecosystem Ch 15: Biodiversity and conservation	Revision and Journal Completion
Syllabus for Pre-Board I: Ch 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15		

Subject: Mathematics

MONTH	CHAPTERS	ACTIVITIES
MARCH- APRIL	Ch3. Matrices Ch4. Determinants Ch2. Inverse Trigonometric Functions	
MAY	Ch2. Inverse Trigonometric Functions (Contd...)	

JUNE	Ch1. Relations and Functions	(1) To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \perp m\}$ is symmetric but neither reflexive nor transitive. (2) To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \parallel m\}$ is an equivalence relation.
JULY	Ch5. Continuity and Differentiability	(3) To demonstrate a function which is not one-one but is onto. (4) To demonstrate a function which is one-one but not onto. (5) To find analytically the limit of a function at a point and also to check the continuity of the function at that point.
Syllabus for P.T. 1: Chapters: 1, 2, 3 and 4		
AUGUST	Ch5. Continuity and Differentiability (Contd...) Ch6. Application of Derivatives	(6) To understand the concepts of absolute maximum and absolute minimum of a function in a given closed interval through its graph. (7) To construct an open box of maximum volume from a given rectangular sheet by cutting equal squares from each corner.
SEPTEMBER	Ch7. Integrals	
Syllabus for H.Y.E: Chapters: 1, 2, 3, 4, 5 and 6		
OCTOBER	Ch7. Integrals (Contd...) Ch8. Application of Integrals Ch9. Differential Equations Ch10. Vector Algebra	(8) To verify that angle in a semi-circle is a right angle, using vector method. (9) To locate the points to given co-ordinates in space, measure the distance between two points in space and then to verify the distance using distance formula.
NOVEMBER	Ch10. Vector Algebra (Contd...) Ch11. Three dimensional geometry Ch13. Probability	(10) To explain the computation of conditional probability of a given event A, when event B has already occurred, through an example of throwing a pair of a dice.
DECEMBER	Ch12. Linear Programming	
Syllabus for Pre board : All chapters		

Subject: Physical Education

Month	Lessons/ Chapters	Activities/ Practical
MARCH & APRIL	Unit 1: Management of Sports Events. Unit 2: Children & Women in Sports (continue)	** Physical Fitness Test: SAI Khelo India Test, Brockport Physical Fitness Test (BPFT)* Practice ** Yoga Practice
MAY	Unit 2: Children & Women in Sports. Continue	** Skill Practice ** Record File – Ch.1 and Ch.2
JUNE	Unit 3: Yoga as Preventive measure for Lifestyle Disease.	
JULY	Unit 4: Physical Education & Sports for CWSN	

Syllabus for Periodic Test-1 : Unit: 1 ,Unit: 2, Unit:3 & 4

AUGUST	Unit5: Sports Nutrition Unit-6 Test & Measurement	Record File – Ch.3
Half Yearly Syllabus: Unit: 1 to Unit:6		
SEPTEMBER	Unit:7 Physiology & Injuries in Sports	** Physical Fitness Test: SAI Khelo India Test, Brockport Physical Fitness Test (BPFT)* Practice
OCTOBER	Unit:8 Biomechanics & Sports	**Skill Practice
NOVEMBER	Unit:9 Psychology in Sports. Unit:10 Training in Sports.	**Physical Fitness Test: SAI Khelo India Test, Brockport Physical Fitness Test (BPFT)* Practice
Syllabus for Pre-board : All Units.		

Subject: Computer Science

Month	Lessons/ Chapters	Activities
MARCH-APRIL	Ch1. Python Revision Tour Ch2. Python Revision Tour-II Ch3. Working With Functions	Program based on lists & Dictionaries Program based on Functions
MAY	Ch3. Working With Functions...cont.	Practical File Programs
JUNE	Ch4. Using Python Libraries	Program based on Libraries
Syllabus for P.T. 1 : Chapters : 1, 2, 3 and 4		
JULY	Ch5. File Handling	Program Based on File Handling
AUGUST	Ch5. File Handling...cont. Ch9.Data Structures: Stacks and Queues using Lists	Program based on Stacks and Queues
SEPTEMBER	Ch12. Simple Queries in SQL Ch13. Table Creation and Data Manipulation Command	SQL Table creations, Data insertion, Queries
Syllabus for Half Yearly Examination : Chapters : 1, 2, 3, 4, 5, and 9		
OCTOBER	Ch 14. Grouping Records, Joins in SQL Ch 15. Interface Python with MySQL	SQL and Introduction to Project
NOVEMBER	Ch 15. Interface Python with MySQL...cont. Ch-10- Communication and Network Concepts Ch 11. Relational Databases	Project Work
Syllabus for Pre Board : All chapters		

Subject: Psychology

MONTH	CHAPTERS	ACTIVITIES
MARCH	Ch-1 Variation in Psychological Attributes	
APRIL	Ch-1 Variation in Psychological Attributes Ch-2 Self and Personality	Test I: Administration of RSPM Test
MAY	Ch-2 Self and Personality	
JUNE	Ch-2 Self and Personality Ch-3 Meeting Life Challenges	Test II: Administration of MPI
JULY	Ch-3 Meeting Life Challenges Ch-4 Psychological Disorders	Test III: Administration of Sinha's Comprehensive Anxiety Test
Syllabus for P.T. 1 - Chapters: 1 & 2		
AUGUST	Ch-4 Psychological Disorders Ch-5 Therapeutic Approaches	Test IV: Administration of Self-Concept Questionnaire
SEPTEMBER	Ch-5 Therapeutic Approaches	Test V: Administration of Adjustment inventory for School Student
Syllabus for H.Y - Chapters: 1 to 4		
OCTOBER	Ch-6 Attitude and Social Cognition	
NOVEMBER	Ch-7 Social Influence and Group Processes	Practical: Case study/ interview (structured or unstructured)/survey/observation (topic shall be provided)
Syllabus for Pre-Board – All chapters		