



COLUMBIA FOUNDATION SCHOOL

D – Block, Vikas Puri, New Delhi - 110018

SYLLABUS : (2018-19)

Class – XII

Features & Guidelines

Complexity / Difficulty Level		
Level	Description	Notes
1	High (H)	Topic needs more attention
2	Medium (M)	Needs moderate attention
3	Easy (L)	Simple topic

- High Level of Difficulty implies more practice and parental guidance towards the topic.
- Classes for subjects like computer, Moral Science, General Knowledge, Drawing and Music are conducted once a week. Hence, the schedule is planned accordingly.
- In English, we have categorized the skills such as Reading, Writing, Vocabulary, Grammar, Speaking, and listening so that the child has a holistic approach towards the language.
- All the activities are relevant to the topic and are planned based on its difficulty level.
- Group activities will instill qualities such as teamwork, sharing and respecting others' opinion among the students.
- Most of the activities help to bridge the gap between theory and practical connecting the students to real life processes.
- Constant recapitulation of the topics helps in proper comprehension and retention of the concepts.
- All the activities in mathematics are designed to erase off fear from the minds of the learners towards the subject.
- Please refer to the syllabus before contacting us for any queries related to the syllabus.

ENGLISH

UT	Month	Book	Topic	Activity
I	Mar.	Flamingo	<ul style="list-style-type: none"> The Last Lesson My Mother at Sixty Six 	Notice Article
	April	Flamingo Vistas Novel	<ul style="list-style-type: none"> Lost Spring The Tiger King Ch. 1, 2,3,4,5 	Letter to the Editor
	May	Vistas Novel	<ul style="list-style-type: none"> Aunt Jenni Memories of Childhood Ch. 1 to 15 	Note Making speech / Debt job application
II	July	Flamingo Vistas Novel	<ul style="list-style-type: none"> Deep Water Enemy An Elementary classroom in a Slum Ch. 11,12,13,14,15 	Advertisement Letters of enquiry / complaint.
	Aug.	Flamingo Vistas	<ul style="list-style-type: none"> On the face t A Thing of Beauty should wizard 	Report Writing. Placing cancellation of order.
	Sept.	Flamingo Vistas	<ul style="list-style-type: none"> Keeping Quiet Ratrap 	Poster Letter to Policy Municipal Commissioner
H.Y.	Oct.	Flamingo Novel	<ul style="list-style-type: none"> Going Places Should Wizard Hit Mommy? Aunt Jennifer's Tigers Ch.26,27,28 	Notice Writing
III	Nov.	Flamingo	<ul style="list-style-type: none"> Keeping Quiet 	Job Application
	Dec.	Novel	Revision	
	Jan.		Pre-Board – I	
	Feb.		Pre-Board - II	

The invisible Man: Novel

MATHEMATICS

Books: NCERT & RD Sharma

UT	Month	Topics
I	Mar.	Ch-3 : Matrices
	April	Ch-12 Linear Programming
	May	Ch-4 : Determinants Ch-2: Inverse Trigonometric functions
II	July & Aug.	Ch-5 Continuity & Differentiability
		Ch-6 Application of Derivatives
		Ch-7 Integrals
		Ch-7 Integrals
		Ch-8 Applications of Integrals Ch-9 Differential Equation
H.Y. Exam	Sept.	Ch-10 Vector Algebra Ch-11 Three Dimensional Geometry
	Oct.	Ch-13 Probability
III	Nov.	Ch-1 Relations & Functions Revision
	Dec.	Revision
P.Brd-1	Jan. / Feb.	Revision

PHYSICS

Book Referred = NCERT

UT	Month	Topic	Practical	Activities
I	Apr	Electric Charges & Field		
	May	<ul style="list-style-type: none"> • Electrostatic Potential & Capacitance • Current Electricity 	<ol style="list-style-type: none"> 1. To find the focal length of concave mirror using convex lens 2. To find the focal length of convex mirror. 3. V-I characteristics of a transistor in n-p-n mode. 	–
	June	<ul style="list-style-type: none"> • Moving Charges & Magnetism • Magnetism & Matter 	–	–
II	July	<ul style="list-style-type: none"> • Electromagnetic Induction • Alternating Current 	<ol style="list-style-type: none"> 1. To determine resistance per cm of a given wire by plotting a graph of potential difference versus current 2. To find resistance of a given wire using metre bridge 	<ul style="list-style-type: none"> • To assemble a house Hold circuit, comprising three bulbs, three On Off) switches, a fuse & a Power source. • To study the variation in Potential drop with length of a wire for a steady current.
	Aug	<ul style="list-style-type: none"> • EM Waves • Ray Optics 	<ol style="list-style-type: none"> 1. To compare E.M.F's of two given primary cells using a potentiometer. 2. To determine the internal resistance of a given primary cell using a potentiometer. 	<ul style="list-style-type: none"> • To assemble the components of a given electrical circuit Say Ohm's law circuit). • To draw the diagram of a given open circuit comprising at least a battery, resistor/ rheostat, key, ammeter & voltmeter. Mark the components that are not connected in proper order & correct the circuit & also the circuit diagram.
H.Y. Exam	Sept	<ul style="list-style-type: none"> • Wave Optics • Semiconductors 	<ol style="list-style-type: none"> 3. To determine resistance of a galvanometer by half deflection method. 4. To find the focal length of a convex lens by plotting graphs between 'u' & 'v'. 	<ul style="list-style-type: none"> • To identify a diode, an LED, a transistor, an IC, a resistor & a capacitor from a mixed collection of such items. • To distinguish between n-p-n & p-n-p type transistor using a multi meter.

III	Oct.	<ul style="list-style-type: none"> • Communication Dual Nature • Atom Molecule 	1. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation. 2. To draw the I - V characteristics curve of a p-n junction in forward bias & reverse bias.	<ul style="list-style-type: none"> • By the use of multimeter, measure resistance, voltage AC / DC), Current AC) & to check continuity of a given circuit. • To identify the base of a transistor & confirm by using a multimeter.
	Nov	Revision	3. To draw the characteristics curve of a Zener diode & to determine its reverse break down voltage.	
	Dec	-	First Pre Board	
	Jan	-	First Pre Board	

CHEMISTRY

Book : NCERT

UT	Month	Topic	Activity
I	Apr	Ch.-1: Solid State Ch.-15: Polymer	• A Salt Analysis
	May	Ch.-2: Solution Ch.-16: Chemistry in Everyday Life	• Salt Analysis
II	July & Aug.	Ch.-4: Kinetics Ch.-3: Electrochemistry Ch.-9: Co-Ordination Comp. Ch.-10: Haloalkanes Ch.-11: Alcohol Phenol & Ether	• Preparation of Solution. • Salt Analysis • Chromatography
	Sept.	Ch.-12: Aldehyde, Ketone & Carboxylic Acid Ch.-13: Organic Chemistry Containing Nitrogen	• Volumetric Analysis • Analysis of Functional Group
H.Y. Exam.	Oct.	Ch.-7: P-Block Ch.-14: Biomolecules Ch.-5: Surface Chemistry	• Volumetric Analysis
III	Nov.	Ch.-8: D & F Block Ch.-6: Isolation of Element	• Analysis of Functional Group
	Dec.	Pre-Board Exam. - I	• Practice
	Jan.	Pre-Board Exam. – II	–

BIOLOGY

Book: NCERT

UT	Month	Topic	Practical
I	April	Ch-1 Reproduction in Organisms Ch-2 Sexual Reproduction in flowering plants Ch-3 Human Reproduction Ch-4 Reproduction Health	Expt. No. 1 & 2
	May	Ch-11 Biotechnology Principles and Processes Ch-12 Biotechnology and its Applications	Expt. No. 3,4,5 & 6
II	July	Ch-5 Principles of Inheritance & Variation Ch-7 Evolution Ch-8 Human Health & Disease	Expt. No. 7,8,9,10,11,12,13 & 14
	Aug.	Ch-9 Strategies of Enhancement in Food Production Ch-10 Microbes in Human Welfare	Expt. No. 15,16 & 17
H.Y. Exam.	Sept.	Ch-13 Organisms & Populations Ch-14 Eco system Ch-15 Biodiversity and Conservation Ch-16 Environmental Issues	Expt. No. 18,19,20,21,22,23 & 24
III	Oct.	Ch-6 Molecular Basis of Inheritance	Expt. No. 25 & 26
	Nov.	Revision	
	Dec.	Pre-Board-I	
	Jan.	Pre-Board-II	

AGRICULTURE

UT	Month	Topic	Practical
I	April	Major Filed Crops: Rice Wheat, Maize, Sorghum, Pearl millet, Ground nut, Mustard, Pigeon pea, Gram	Ex. No.1 - 5
II	May	Sugarcane, Cotton, Berseem	Ex. No. 6 – 12
	July & Aug.	Soil, Soil fertility, Fertilizers and Manures i. Weed control ii. Fruit & Vegetable Preservation iii. Preparation of jellies, Jams, ketchup, chips & their packing.	Ex. No. 13 – 20
H.Y. Exam	Sep.	Crop Production: i. Introduction ii. Irrigation and Drainage iii. Horticulture	–
III	Oct.	Cultivation Practices, processing and marketing of fruits, vegetables and flowers.	–
	Nov.	Revision	
IV	Dec.	Pre-Board	
	Jan.	Pre-Board	

ECONOMICS

UT	Month	Books	Topics
I	April	Sandeep Garg Macro Economics	Ch – 7,8,9 Determination of Income and Employment
	May	Sandeep Garg Macro Economics	Ch-10 Govt. Budget Ch-5 Money Ch-6 Banking
	July	Sandeep Garg Macro Economics	Ch-1,2,3,4 National Income
	Aug.	Sandeep Garg Micro Economics	Ch-1 Introduction of Micro Economics Ch-2 Consumer Behaviour & Demand Ch-3 Producer Behaviour and Supply\
II	Sept.	Sandeep Garg Micro Economics	Ch-4 Market and Price Determination
	Oct.	Sandeep Garg Macro Economics	Ch-11,12 Balance of Payment
H.Y. Exam	Nov.	Sandeep Garg Micro & Macro Economics	Revision of Micro and Micro
III	Dec.		Pre-Board 1st
	Jan.		Pre-Board 2nd

ACCOUNTANCY

UT	Month	Books	Topics
I	Mar.	T.S. Garewal (Part-I)	Ch-1 Fundamental of Partnership
	April	T.S. Garewal (Part-II)	Ch-1 Contd... Ch-2 Valuation of Goodwill Ch-3 Change in P.S.R.
	May	T.S. Garewal (Part-II)	Ch-4 Admission of A Partner
II	July	T.S. Garewal (Part I)	Ch-5 Retirement & Death of a Partner Ch-6 Dissolution of Partnership firm
	Aug.	T.S. Garewal (Part- I)	Ch-7 Issue of Shares Ch-8 Issue of Debentures
	Sept.	T.S. Garewal (Part-II)	Ch-9 Redemption of Debentures Ch-10 Not for Profit Organisation Ch-1 Financial Statements of Companies Ch-2 Analysis of Financial Statements
H.Y. Exam	Oct.	T.S. Garewal (Part-II)	Ch-3 Comparative & Common size Statements Ch-4 Ratio Analysis Ch-5 Cash Flow Statement
III	Nov.	T.S. Garewal (Part I)	Project Work Revision
	Dec & Jan	Pre-Board - I Pre-Board - II	–

BUSINESS STUDIES

Book: Poonam Gandhi / G.S. Alag / NCRT

UT	Month	Topic	Activities
I	Mar.	Ch-1 Nature & Significance of Management	–
	April	Continuation of Chapter-1 Ch-2 Principles of Management Ch-3 Business Environment	Presentation
	May	Ch-4 Planning / Organizing	Project Work
II	July	Continuation of Chapter-4 Ch-5 Organizing	–
	Aug.	Ch-6 Staffing Ch-7 Directing	Case Study
H.Y. Exam.	Sept.	Ch-8 Controlling Ch-9 Financial Management Ch-10 Financial Market	–
III	Oct.	Ch-11 Marketing Management	Group Discussion
	Nov.	Ch-12 Consumer Protection Revision	–
	Dec.	Pre-Board Exam-I	–
	Jan.	Pre-Board Exam-II	–

ENGINEERING GRAPHICS

UT	Month	Book	Topic	Activity
I	Apr.	Modern Engineering Graphics - II	Isometric Views of Solids	Prepare plate 1,2, 3
	May & June	Modern Engineering Graphics	Isometric Views of Combination of Solids	Plate 4 & 5
II	July	Modern Engineering Graphics	Machine Parts Treads	Plate 6, 7 & 8
	Aug.	Modern Engineering Graphics	Assembly Disassembly Rod Joints	Plate 9,10,11,12 & 13
H.Y. Exam.	Sept.	Modern Engineering Graphics	Revision Multiple choice question	
III	Oct.	Modern Engineering Graphics	Rods Flanged Coupling	Plate 14, 15 & 16
	Nov.	Modern Engineering Graphics	Bush Bearing	Plate 17,18 19 & 20
	Dec.	Pre Board- I	Revision Practical Blocks	C.A.D. Project
	Jan.	Pre Board- II	Revision	

ENTREPRENEURSHIP

UT	Month	Topic	Activity
I	Apr. / May	Ch-1 Entrepreneurial Opportunity	–
	July	Ch-3 Enterprise Planning	Market Research
II	Aug.	Ch-4 Enterprise Marketing	–
H.Y. Exam.	Sept.	Ch-5 Enterprise Growth Strategies	–
III	Oct.	Ch-6 Business Arithmetic	–
PB-1	Nov.	Ch-7 Resource Mobilization	–
PB-2	Dec.	Project Work	–
	Jan.	Revisions	–
	Feb.	Final Exam.	–

COMPUTER SCIENCE

Book: C++ by Sumita Arora , Notes & Assignment

UT	Month	Topic	Practical
I	March	Ch. – 1 Revision of XI	Practical FOR C++ Programs
	April	Ch. – 13 Boolean Algebra Ch. – 11 Database Concepts Ch. – 12 My SQL Ch. – 2 OOP Concepts	Practical based on SQL commands
		May	Ch. – 3 Function Overloading Ch. – 4 Class & Objects Ch. – 5 Constructor & Destructor Ch. – 7 File handling
II	July	Ch. – 7 Contd. Ch. – 6 Inheritance	Submission of Program files with 25 programs.
	Aug.	Ch. – 8 Pointers Ch. – 9 Arrays	Practical for Pointer & Arrays.
H.Y. Exam	Sept.	Revision Ch. – 10 Linked List	Practical based on data structure.
	Oct.	Ch. -10 Stacks & Queues	Practical work.
	Nov.	Ch. – 14 Computer Networking & OSS Revision Tests	Final Submission of Program file with 40 programs & Project file.
	Dec.	Pre Board – I	Mock Viva
	Jan.	Pre Board – I	

PHYSICAL EDUCATION

U.T.	Month	Topic
I	Apr.	Planning in Sports <ul style="list-style-type: none"> • Meaning and Objectives of Planning • Various Committees and its responsibilities • Tournament - Knock-Out, League or Round Robin and Combination • Procedure to draw Fixtures - Knock-Out (Bye and Seeding) & League (Staircase & Cyclic) • Intramural and Extramural - Meaning, Objectives and its Significance • Specific Sports Programme (Sports Day, Health Run, Run for Fun, Run for Specific Cause and Run for Unity)
	May	Sports and Nutrition <ul style="list-style-type: none"> • Balanced Diet and Nutrition: Macro and Micro Nutrients • Nutritive & Non-Nutritive Components of Diet • Eating Disorders-Anorexia Nervosa & Bulimia • Effects of Diet on Performance • Eating for Weight Control - A Healthy weight, the pitfalls of Dieting, food intolerance & food myths • Sports Nutrition (fluid & meal intake, pre, during & post competition)
II	July	Yoga 8t Lifestyle <ul style="list-style-type: none"> • Asanas as preventive measures • Obesity: Procedure, Benefits 8t contraindications for Vajrasana, Hastasana, Trikonasana, Ardh Matsyendrasana • Diabetes: Procedure, Benefits 8t contraindications for Bhujangasana, Paschimottasana, Pavanuktasana, Ardh Matsyendrasana • Asthma: Procedure, Benefits 8t contraindications for Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Paschimottasana, Matsyasana • Hypertension: Tadasana, Vajrasana, Pavanuktasana, Ardha Chakrasana, Bhujangasana, Sharasana • Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana
	Aug.	Physical Education 8t Sports for Differently-Abled <ul style="list-style-type: none"> • Concept of Disability fit Disorder • Types of Disability, its causes fit nature (cognitive disability, intellectual disability, physical disability) • Types of Disorder, its cause fit nature (ADHD, SPD, ASD, ODD, OCD) • Disability Etiquettes • Advantage of Physical Activities for children with special needs • Strategies to make Physical Activities assessable for children with special need.
		Unit-V : Children 8t Sports <ul style="list-style-type: none"> • Motor development 8t factors affecting it • Exercise Guidelines at different stages of growth 8t Development • Advantages 8t disadvantages of weight training • Concept 8t advantages of Correct Posture • Causes of Bad Posture • Common Postural Deformities - Knock Knee; Flat Foot; Round Shoulders; Lordosis, Kyphosis, Bow Legs and Scolioses • Corrective Measures for Postural Deformities

		Women & Sports <ul style="list-style-type: none"> • Sports Participation of Women in India • Special Consideration (Menarch, Menstrual Dysfunction, Pregnancy, Menopause) • Female Athletes Triad (Anemia, Osteoporosis & Amenorrhea) • Psychological Aspects of Women Athlete • Sociological Aspects of Sports Participation • Ideology
		Test 8t Measurement in Sports <ul style="list-style-type: none"> • Computation of Fat Percentage - Slaughter - Lohman Children Skinfold Formula: • Triceps fit Calf Skinfold (Male 6 to 17 yrs - % body fat = (0.735 X sum of skinfold) + 1.0 • (Female 6 to 17 yrs - % body fat = (0.610 X sum of skinfold) + 5.0 • Measurement of Muscular Strength - Kraus Weber Test • Motor Fitness Test - AAPHER • General Motor Fitness - Barrow three item general motor ability (Standing Broad Jump, Zig Zag Run, Medicine Ball Put - For Boys: 03 Kg fit For Girls: 01 Kg) • Measurement of Cardio Vascular Fitness - Harvard Step Test/Rockport Test - • Computation of Fitness Index: Duration of the Exercise in 2nd x 100 • 5.5 x Pulse count of 1-1.5 Min after Exercise • Rikli 6t Jones - Senior Citizen Fitness Test <ul style="list-style-type: none"> 1. Chair Stand Test for lower body strength 2. Arm Curl Test for upper body strength 3. Chair Sit fit Reach Test for lower body flexibility 4. Back Scratch Test for upper body flexibility 5. Eight Foot Up 8t Go Test for agility 6. Six Minute Walk Test for Aerobic Endurance
H.Y. Exam.	Sept.	Physiology 8t Sports <ul style="list-style-type: none"> • Gender differences in physical 8t physiological parameters. • Physiological factor determining component of Physical Fitness • Effect of exercise on Cardio Vascular System • Effect of exercise on Respiratory System • Effect of exercise on Muscular System • Physiological changes due to ageing • Role of physical activity maintaining functional fitness in aged population
		Sports Medicine <ul style="list-style-type: none"> • Concept & Definition • Aims & Scope of Sports Medicine • Impact of Surface & Environment on Athletes • Sports Injuries: Classification, Causes & Prevention • Management of Injuries <ul style="list-style-type: none"> Soft Tissue Injuries (Abrasion, Contusion, Laceration, Incision, Sprain & Strain) Bone & Joint Injuries (Dislocation, Fractures; Stress Fracture, Green Stick, Comminuted, Transverse Oblique & Impacted)
III	Oct.	Kinesiology, Biomechanics 8t Sports <ul style="list-style-type: none"> • Projectile fit factors affecting Projectile Trajectory • Newton's Law of Motion fit its application in sports • Aerodynamics Principles • Friction fit Sports

	<ul style="list-style-type: none"> • Introduction to Axes fit Planes • Types of movements (Flexion, Extension, Adbuction fit Adduction) • Major Muscles involved in running, jumping fit throwing
	Psychology 8t Sports <ul style="list-style-type: none"> • Understanding Stress 8t Coping Strategies (Problem Focussed 8t Emotional Focussed) • Personality; its definition fit types - Trait fit Type (Sheldon fit Jung Classification) fit Big Five Theory • Motivation, its type fit techniques • Self-esteem 8t Body Image • Psychological benefits of exercise • Meaning, Concept 8t Types of Aggressions in Sports
Nov.	Training in Sports <ul style="list-style-type: none"> • Strength - Definition, types and methods of improving strength - Isometric, Isotonic and Isokinetic • Endurance - Definition, types and methods to develop Endurance - Continuous Training, Interval Training and Fartlek Training • Speed - Definition, types and methods to develop speed - Acceleration run & pace run • Flexibility - Definition, types and methods to improve flexibility • Coordinative abilities - Definition and types
Dec.	Pre-Board
Jan	Revision
Feb.	Revision
March	CBSE Board