



SAINT JOHN'S ACADEMY, ALLAHABAD  
SYLLABUS 2022 -2023  
CLASS XII (ISC 2023)

NOTE: Preliminary Exam includes the entire year's syllabus in all subjects.

**ENGLISH LANGUAGE**

*TOTAL ENGLISH (Morning Star) Xavier Pinto & Pinto*

**HALF-YEARLY**

<b>Month</b>	<b>Topics</b>
April	<b>Compositions:</b> Descriptive & Narrative
April	<b>Grammar:</b> Tenses and their Uses Sequence of Tenses Active and Passive Prepositions
April	<b>Directed Writing:</b> Personal Profile
April	<b>Comprehension Passage</b>
May	Proposal Writing
May	<b>Composition:</b> Short Story Writing
May	<b>Listening Skills; Speaking Skills (Assessment)</b>
May	<b>Grammar:</b> Agreement of Verb with the subject Direct and Indirect Speech
July	<b>Statement of Purpose</b>
July	<b>Composition:</b> Discursive & Argumentative
July	<b>Directed Writing:</b> Article Writing & Speech Writing

**PRE BOARDS**

<b>Month</b>	<b>Topics</b>
August	<b>Directed Writing:</b> Crime Report
August	<b>Directed Writing:</b> Book Review Film Review Cultural Programme Review
August	<b>Composition:</b> Reflective
Sept.	<b>Proposal Writing</b>
Sept.	<b>Grammar:</b> Transformation of sentences Preposition Phrasal Verb <b>Comprehension Passage</b>
October	<b>Directed Writing:</b> Accident report Sports Event Report
October & November	<b>Listening Skills; Speaking Skills (Assessment)</b>
November	<b>Revision of the entire syllabus solving specimen papers.</b>

## ENGLISH LITERATURE

The Tempest (S. Chand)

Echoes: A Collection of ISC Short Stories (Evergreen Publications)

Reverie: A Collection of ISC Poems (Evergreen Publications)

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	04	<b>Echoes:</b> To Build a Fire
April	05	<b>Echoes :</b> The Story of an Hour
May	01	<b>Reverie:</b> The Darkling Thrush
July	02	<b>Reverie:</b> Birches
July	-	<b>Drama:</b> The Tempest Act IV

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
August	08	<b>Echoes:</b> The Singing Lesson
August	09	<b>Echoes:</b> The Sound Machine
Sept.	10	<b>Echoes:</b> B. Wordsworth
Sept.	05	<b>Reverie:</b> Crossing the Bar
October	08	<b>Reverie:</b> Dover Beach
November	10	<b>Reverie:</b> We are the music makers
November		<b>Drama:</b> The Tempest Act V

## PHYSICS

Book :- *ISC Nootan Physics for Class XII (Nageen Prakashan)*

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	1.	Electric charges and Fields
April	2.	Gauss Theorem
April	3.	Electric Potential
May	4.	Capacitors and Dielectrics
May	5.	Electric resistance and Ohm's Law.
July	6.	DC Circuits and Measurements
		<b>Practical:</b>
	1.	<i>To determine the resistance of a wire using meter bridge.</i>
	2.	<i>To determine specific resistance of a given wire.</i>
	2.	<i>To determine the internal resistance of a cell by a potentiometer.</i>

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
July	7 to 10	Magnetic effects of Current and Magnetism
August	11	Electromagnetic Induction
August	12.	Alternating Current
August	13.	Electromagnetic Waves.
September	14.	Refraction of light: Spherical mirrors
September	15.	Refraction of light: Plane Surfaces

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
September	16.	Refraction of light at spherical surfaces: Lenses
September	17.	Refraction and dispersion of light through a Prism.
September	18	Optical Instruments
September	19	Wave nature of light.
September	20	Interference of light.
October	21	Diffraction of light
October	22	Polarization of light.
		<b>Practicals:</b>
	4.	To calculate the ' $f$ ' of a convex lens using $u - v$ method.
	5.	To determine ' $f$ ' of a convex lens by displacement method.
	6.	To determine ' $f$ ' of a convex lens by co-axial combination with another lens.
October	23.	Photoelectric effect
October	24.	Matter Waves
October	25.	X - Rays
November	26. - 30	Atoms and Nuclei
November	31 - 34	Electronic Devices
November	35	Communication Systems

## CHEMISTRY

*Book :- ISC Nootan Chemistry Vol. II (Nageen Prakashan)*

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	1	Solid State
April	2	Solution
April		<i>Practicals - Volumetric Analysis</i>
May	6	General Principles of isolation of elements.
July	10	Halo alkanes & halo arenes
July	11	Alcohol, Phenol and Ethers
July	15	Polymers
July		<i>Practical :- Qualitative Analysis</i>

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
August	7	p - Block Elements
August	3	Electrochemistry
August	14	Bio-molecules
August		<i>Practical :- Qualitative Analysis</i>
Sept.	4	Chemical Kinetics
Sept.	5	Surface Chemistry
Sept.		<i>Practical - Identification of Organic Compounds</i>
October	9	Co-ordination compounds
October	16	Chemistry in everyday life.
November	8	d & f Block elements
November	12	Aldehydes, Ketones and Carboxylic acid
November	13	Organic Compounds containing Nitrogen

**BIOLOGY**

Book :- ISC Nootan Biology Vol. II (Nageen Prakashan)

**HALF-YEARLY**

<b>Month</b>	<b>Ch. No.</b>	<b>Topics</b>
	<b>Unit I</b>	<b>Reproduction</b>
April	(i)	Reproduction in organisms
April	(ii)	Sexual reproduction in flowering plants
April	(iii)	Human reproduction
April	(iv)	Reproductive health
April		<b>Practical -</b> <b>1. Taxonomy</b> <i>Study of Floral Characteristics through dissection of flowers, drawing floral formula and diagrams of the following families.</i> (i) Malvaceae – China rose (ii) Leguminosae – Subfamily – Papilionacena - Sweet Pea/ Pea/ bean/ Clitoria (iii) Solanaceae – Petunia/ Datura/ Btinal (iv) Liliaceae – Onion/ Lily/ Spider lily/ Gladrolus
April		<b>2. Slide Preparation</b> (i) Germination of pollen grain in a nutrient medium. (ii) L.S. of Monocot seed – Maize/ wheat (iii) L.S. of Dicot seed – Pea/ Bean
April		<b>3. Spotting</b> <b>Identify and Comment.</b> (I) T.S. of Ovary of Mammal (ii) T.S. of Testis of Mammal (iii) Germinating pollen grain (iv) T.S. of Ovary to show the type of placentation (marginal, axile, basal, parietal) (v) T.S. of Blastula
May		<b>Slide Preparation</b> (i) T.S. of a hydrophyte stem. (ii) T.S. of a xerophytic leaf (Nerium)
May		<b>Spotting</b> (i) W.M. of Plasmodium sporozoite (ii) W.M. of Entamoeba histolytica (iii) preserved specimen of Ascaris (iv) Ecological Adaptation of Plants and animals. <i>Hydrophyte/ Aquatic habitat</i> <i>Plant – Hydrilla/ Water hyacinth</i> <i>Animal – Fish</i> <i>Xerophytic habitat</i> <i>Plant – Cactus</i> <i>Animal - Camel</i>
May		<b>PHYSIOLOGICAL AND BIOCHEMICAL EXPERIMENT</b> (i) isolate DNA from available plant material.
	<b>Unit II</b>	<b>Genetics and Evolution</b>
July	(i)	Principles of Inheritance and variation
July	(ii)	Molecular basis of Inheritance
July	(iii)	Evolution

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
	<b>Unit III</b>	<b>Biology and Human Welfare</b>
August	(I)	Human Health and Diseases
September	(ii)	Strategies for Enhancement in food production.
September	(iii)	Microbes in Human Welfare
Aug - Oct.		<i>BIOCHEMICAL AND PHYSIOLOGICAL EXPERIMENTS</i> (i) Arrangement/ Distribution of stomata in - Monocot leaf - Dicot leaf (ii) Study of soils from different sites (iii) To study the effect of enzyme action.
	<b>Unit IV</b>	<b>Biotechnology and it's applications</b>
October	(I)	Biotechnology - Principles and Processes
October	(ii)	Biotechnology and its applications.
	<b>Unit V</b>	<b>Ecology and Environment</b>
November	(I)	Organisms and Populations
November	(ii)	Ecosystem
November	(iii)	Biodiversity and its Conservation
November	(iv)	Environmental Issues

### MATHEMATICS

*Book :- ISC Mathematics For Class XII By M.L. Agarawal (APC)*

#### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	01	Relations and Functions (A)
April	02	Inverse Trigonometric Functions (A)
April	03	Matrices (A)
May	04	Determinants (A)
July	01	Vectors (B)
July	02	Three Dimensional Coordinate Geometry (B)
August	05	Calculus (A)
August	05	Continuity and Differentiability (A)
Sept.	06	Indeterminate forms(A)
Sept.	07	Application of Derivatives (A)

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
Sept.	08	Integrals (A)
Sept.	08	Indefinites Integral
Sept. - October	09	Differential Equations (A)
November	10	Probability (A)
November	02	Planes (A)
November	03	Application of Integrals (A)

## ACCOUNTS

*Book :- ISC Accounts Class XII By D.K. Goel (Avichal Publications)*

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	1	Fundamentals of Partnership
May	2	Goodwill
May	3	Admission of partner
May	4	Issue of Shares
July	4	Issue of Shares (Continued)
July	5	Final Statement of Companies
July	6	Ratio Analysis

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
August	6	Ratio Analysis (Continued)
August	7	Retirement of Partner
Sept.	8	Death of Partner
Sept.	9	Dissolution of partnership
October	10	Issue of Debentures
October	11	Redemption of Debentures
November	12	Cash flow statement
November	13	Comparative Statement
November	14	Common size statement

## ECONOMICS

*Book :- Frank ISC Economics XII(Frank Bros.)*

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	2	Demand & Law of Demand
April	3	Theory of Consumer Behaviour
April	4	Elasticity of Demand
April	5	Supply - Law of Supply & Price Elasticity of Supply
May	6	Market Mechanism: Equilibrium Price and Quantity in a Competitive Market.
July	7	Laws of Return - Returns to a factor and Returns top Scale
July	9	Forms of Market

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
August	8	Cost & Revenue
August	10	Producer's Equilibrium
August	11	Determination of Equilibrium Price & Output Under Perfect Competition.
September	12	Theory of Income & Employments
September	13	Money : meaning and Functions
September	14	Banks: Commercial Bank and Central Bank
October	15	Balance of Payments & Exchange Rate

October	16	Fiscal Policy
October	17	Government Budget
November	18	National Income and Circular Flow of Income
November	19	National Income Aggregates
November	20	Methods of measuring National Income

## COMMERCE

*Book :- ISC Commerce For Class XII (S. Chand)*

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	1	Business Environment
April	2	Capital - Fixed & Working
May	3	Sources of finance for a Joint Stock Company
May	4	Banking -Latest Trends
July	5	Management - Meaning , Nature & Importance
July	6	Principles of Management
July	7	Functions of Management

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
August	8	Planning
August	10	Staffing
Sept.	11	Directing
Sept.	12	Controlling
Oct.	13	Marketing concepts & functions
Oct.	14	Marketing Mix
Nov.	15	Consumer Protection
Nov.	9	Organising

## POLITICAL SCIENCE

*Book :- ISC Political Science XII (K.K. Ghai) Kalyani Publications*

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	8	Forms of Government
April	2	Constitution
May	3	Franchise and Representation
July	4	The Legislature

### PRE BOARDS

August	5	The Executive	
August	6	The Judiciary	
September	7	Indian Constitution	
October	8	Fundamental Rights and directive Principles	
October	9	Local Self Government	
November	10	Democracy in India - A perspective of the challenges faced	

## HISTORY

*Book :- ISC History Class XII (Kalyani Publishers)*

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	1	Towards Independence and Partition: The Last Phase (1935 - 1947)
April	2	Establishment and Development of Indian Democracy (1947 - 1966)
May	3	Challenges to Indian Democracy (1964 - 1977)
July	4	Changing face of the Indian Democracy (1977-1986)

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
August	5.	India's Foreign Policy
August	6.	Movement For Women's Rights
September	7	World War II
September	8	De-Colonisation - In Asia (China) and Africa (Ghana & Kenya)
October	9.	Cold War 1945 - 91 - Origin, Course, End and Impact
November	10.	Protest Movements
November	11.	Middle East: Israeli - Palestine conflict (1916 - 1993)

## COMPUTER SCIENCE

*Book :- ISC Computer Science (Dhanpat Rai and Co. Publications)*

### HALF-YEARLY

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
April	1	Boolean Algebra
April	2	Computer Hardware
April	3	Object Classes (Revision)
April	4	Java Revision Tour (Revision)
April	5	Primitive Values, Type Casting and Expressions (Revision)
April	6	Statements, Control Structures and Scope (Revision)
May	7	Functions and Methods
May	8	Arrays and Strings
May	9	Compiling and Running Java Programs
July	10	Java Classes : An OOP Perspective
July	11	Recursion

### PRE BOARDS

<u>Month</u>	<u>Ch. No.</u>	<u>Topics</u>
August	12	Concept of Inheritance
August	13	Simple Data Structures
Sept.	14	Recursive Data Structures
October	15	Computational Complexity
November onwards		Implementation of Algorithms Project/ Assignment Revision and solving of all relevant previous year(s) board questions.