

SYLLABUS 2024-25



AGRASAIN BOYS' SCHOOL

[Affiliated to Council for the Indian School Certificate Examinations, New Delhi]

21/A, Agrasain Street, Liluah, Howrah-711204

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XII

Science



AGRASAIN BOYS' SCHOOL

Affiliated to the Council for the Indian School Certificate Examinations, New Delhi
21/A, Agrasain Street, Liluah, Howrah - 711 204
Website: www.agrasainboysschool.edu.in
Email: absceo@rediffmail.com / Phone: 033 2655 4544/47

SYLLABUS : 2024-25

Class : XII

SCIENCE

Class : XII

Dear Parents,

All teachers have been advised to follow this syllabus and teaching schedule strictly.

In case your child is sick or absent for a long time, please prepare him as per schedule of chapters given in this booklet.

Teachers of all sections will complete the syllabus at least two weeks before Assessment Test to facilitate interactive revision.

All workbooks will be filled in by students and submitted to subject teachers for checking as the chapters are completed term wise.

In case of difficulty please contact respective Teacher-in-Charge (Primary/ Secondary).

Your co-operation will ensure better education to your child.

Principal



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SYLLABUS : 2024-25

Class : XII (Science)

Class : XII

ENGLISH LANGUAGE : _____

❖ **PRE-TEST EXAMINATION :**

1. Composition
2. (a) Directed writing (article writing, newspaper report, Book review, speech writing, and statement of purpose) based on suggested points.
(b) Proposal Writing
3. Short-answer questions to test grammar, structure and usage.
4. Comprehension.

❖ **ASSESSMENT-I EXAMINATION:**

1. Composition
2. (a) Directed writing (article writing, newspaper report, Book review, speech writing, and statement of purpose) based on suggested points.
(b) Proposal Writing
3. Short-answer questions to test grammar, structure and usage.
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❖ **ASSESSMENT-II EXAMINATION:**

1. Composition
2. (a) Directed writing (article writing, newspaper report, Book review, speech writing, and statement of purpose) based on suggested points.
(b) Proposal Writing
3. Short-answer questions to test grammar, structure and usage.
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❖ **PERIODICAL EXAMINATION:**

1. Composition writing
2. (a) Directed writing (article writing, newspaper report, Book review, speech writing, and statement of purpose) based on suggested points.

(b) Proposal Writing

3. Short-answer questions to test grammar, structure and usage.
4. Comprehension.

❖ **PRE-BOARD EXAMINATION:**

1. Composition writing
2. Directed writing (article writing, newspaper report, Book review, speech writing, and statement of purpose) based on suggested points.

(b) Proposal Writing

3. Short-answer questions to test grammar, structure and usage.
4. Comprehension.

❖ **English Language Project**

- A. Prepare a project on any one of the following topics.
 1. A process description (e.g. instruction to operate a device, a recipe, a scientific experiment)
 2. Description of a sporting event.
 3. An autobiographical experience
- B. Listening and speaking skills (topics for speaking skills will be provided by the subject teachers during the classes)

□ **ENGLISH LITERATURE :** _____

❖ **PRE-TEST EXAMINATION :**

- I. **DRAMA:** Macbeth – William Shakespeare (Acts 3 till pages done)
- II. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)
 1. Atithi/Guest – Rabindranath Tagore
- III. **RHAPSODY:** A Collection of ISC Poems (Evergreen Publications (India) Ltd. New Delhi)
 1. Telephone Conversation – Wole Soyinka
 2. Tithonus Alfred, Lord Tennyson

❖ **ASSESSMENT-I EXAMINATION:**

- I. **DRAMA:** Macbeth – William Shakespeare Act3(full)
- II. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)
 1. Atithi/Guest – Rabindranath Tagore
 2. The Cookie Lady – Philip K. Dick
 3. There Will Come Soft Rains – Ray Bradbury
 4. Indigo -Satyajit Ray
- III. **RHAPSODY:** A Collection of ISC Poems Evergreen Publications (India) Ltd. New Delhi)

1. Telephone Conversation – Wole Soyinka
2. Tithonus-Alfred, Lord Tennyson
3. Beethoven – Shane Koyczan
4. Small Towns and the River – Mamang Dai

❖ **ASSESSMENT-II EXAMINATION:**

- I. **DRAMA: Macbeth** – William Shakespeare (Acts 3 full & 4 till pages done)
- II. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)
 1. Atithi/Guest – Rabindranath Tagore
 2. Cookie Lady – Philip K. Dick
 3. There Will Come Soft Rains – Ray Bradbury
 4. Indigo-Satyajit Ray
 5. The Medicine Bag – Virginia Driving Hawk
- III. **RHAPSODY:** A Collection of ISC Poems (Evergreen Publications (India) Ltd. New Delhi)
 1. Telephone Conversation – Wole Soyinka
 2. Tithonus-Alfred, Lord Tennyson
 3. Beethoven – Shane Koyczan
 4. Small Towns and the River – Mamang Dai
 5. Death be not Proud – John Donne

❖ **PERIODICAL EXAMINATION:**

- I. **DRAMA:** Macbeth – William Shakespeare (Act 3- full, Act 4 – full, Act 5- till pages done)
- III. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)
 1. Atithi/Guest – Rabindranath Tagore
 2. Cookie Lady – Philip K. Dick
 3. There Will Come Soft Rains – Ray Bradbury
 4. Indigo-Satyajit Ray
 5. The Medicine Bag – Virginia Driving Hawk
- IV. **RHAPSODY:** A Collection of ISC Poems (Evergreen Publications (India) Ltd. New Delhi)
 1. Telephone Conversation – Wole Soyinka
 2. Tithonus-Alfred, Lord Tennyson
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 5. Death be not Proud – John Donne

❖ PRE-BOARD EXAMINATION:

- I. **DRAMA:** Macbeth – William Shakespeare (full)
- II. **PRISM:** A Collection of ISC Short Stories (Evergreen Publications (India) Ltd. New Delhi)
 1. Atithi/Guest – Rabindranath Tagore
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 5. Death be not Proud – John Donne

❖ English Literature Projects

With reference to the play Macbeth, give a character sketch of Lady Macbeth based on the guilt and remorse that she undergoes after her conscience strikes her.

Candidates are required to undertake a written Assignment of **1000-1500** words on the above topic which should be structured as given below:

The written assignment must follow the structure given below:

- Introduction:
 - Explanation of the question that has been framed
 - Explanation of how the candidate intends to interpret the chosen text and Literary materials used in the process
- Main Body – organised and well-structured treatment of the question using appropriate sub-headings.
- Conclusion – comprehensive summary of the points made in the main body.

❖ INSTRUCTIONS TO THE CANDIDATES FOR ENGLISH PROJECTS:

1. The Projects are for ISC Board.
2. Handwriting should be neat and clear.
3. Write relevant matter and make it very creative.
4. Relevant pictures and quotations must be there. Pictures only on the non-ruled sheet and write on the ruled side.
5. Proper heading should be written in BOLD.
6. Significant lines, phrases and dialogues should be highlighted.
7. Do not use red and green ink.
8. Write relevant details on the first page itself.

9. School logo Subject, topic, submitted by and submitted to should be clear and legible.

□ **2ND LANGUAGE HINDI :** _____

- पुस्तकें : १) काव्य मंजरी
२) गद्य संकलन
३) सारा आकाश
४) हिन्दी व्याकरण मंजूषा

❖ **PRE-TEST EXAMINATION:**

काव्य मंजरी :-

- 1) साखी
- 2) अंधेरे का दीपक

गद्य संकलन :-

- 1) पुत्र प्रेम
- 2) मजबूरी

सारा आकाश :-

उत्तरार्द्ध - (१-६)

व्याकरण :-

- 1) निबंध
- 2) अपठित गद्यांश
- 3) अशुद्ध वाक्यों को शुद्ध करो (सम्पूर्ण पाठ्यक्रम)
मुहावरें (सम्पूर्ण पाठ्यक्रम)

❖ **ASSESSMENT-I EXAMINATION:**

काव्य मंजरी :-

- 1) बाल-लीला
- 2) एक फूल की चाह
- 3) आ :धरती कितना देती है

गद्य संकलन :-

- 1) गौरी

Class : XII

2) शरणागत

3) सती

सारा आकाश :-

उत्तरार्द्ध - (७,८)

व्याकरण :-

1) निबंध

2) अपठित गद्यांश

3) अशुद्ध वाक्यों को शुद्ध करो (सम्पूर्ण पाठ्यक्रम)
मुहावरें (सम्पूर्ण पाठ्यक्रम)

❖ **ASSESSMENT-II EXAMINATION:**

काव्य मंजरी - सम्पूर्ण पाठ्यक्रम

गद्य संकलन - सम्पूर्ण पाठ्यक्रम

सारा आकाश - उत्तरार्द्ध (९,१०)

व्याकरण - सम्पूर्ण पाठ्यक्रम

❖ **PERIODICAL EXAMINATION :**

काव्य मंजरी - सम्पूर्ण पाठ्यक्रम

गद्य संकलन - सम्पूर्ण पाठ्यक्रम

सारा आकाश - सम्पूर्ण पाठ्यक्रम

व्याकरण - सम्पूर्ण पाठ्यक्रम

❖ **PRE-BOARD EXAMINATION:**

काव्य मंजरी - सम्पूर्ण पाठ्यक्रम

गद्य संकलन - सम्पूर्ण पाठ्यक्रम

सारा आकाश - सम्पूर्ण पाठ्यक्रम

व्याकरण - सम्पूर्ण पाठ्यक्रम

निम्नलिखित विषयों में से किसी एक विषय पर हिंदी में लगभग 1000 से 1500 शब्दों में परियोजना तैयार कीजिए।

1. कहानी कला की दृष्टि से 'पुत्र-प्रेम' कहानी पर परियोजना तैयार कीजिए।

2. 'एक फूल की चाहकविता को कहानी में रूपांतरित करते हुए परियोजना तैयार कीजिए।'

Listening and speaking skill to be done in regular Hindi class.

□ 2ND LANGUAGE BENGALI : _____

পুস্তক : ISC প্রবন্ধ ও গদ্য সংকলন, ISC কবিতা সংকলন, কোনি, ভাষা সোপান

❖ PRE-TEST EXAMINATION: (80 + 20 Marks)

গল্প – না পাহারার পরীক্ষা + class XI full syllabus.

কবিতা- বাবরের প্রার্থনা, + class XI full syllabus.

কোনি –১-৮

1. ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম।

❖ ASSESSMENT-I EXAMINATION: (80 + 20 Marks)

গল্প – একটি তুলসী গাছের কাহিনী + pre test full syllabus + class XI full syllabus.

কবিতা- যদি নির্বাসন দাও +pre test full syllabus + class XI full syllabus.

কোনি -১-১১

ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম।

❖ ASSESSMENT-II EXAMINATION: (80 + 20 Marks)

2. গল্প – লছ মনের মা +pre test full syllabus + first assessment full syllabus + class XI full syllabus.

3. কবিতা- বর্ণপরিচয় + pre test + 1st assessment + class XI full syllabus.

4. কোনি – সমগ্র পাঠ।

5. ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম।

❖ PERIODICAL EXAMINATION : (80 + 20 Marks)

6. গল্প – ISC সমগ্র পাঠ্যক্রম

7. কবিতা- ISC সমগ্র পাঠ্যক্রম

8. কোনি – সমগ্র উপন্যাস

9. ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম।

❖ PRE-BOARD EXAMINATION: (80 + 20 Marks)

গল্প – ISC সমগ্র পাঠ্যক্রম

কবিতা- ISC সমগ্র পাঠ্যক্রম

কোনি – সমগ্র উপন্যাস

ব্যাকরণ ও নির্মিতি ISC সমগ্র পাঠ্যক্রম।

□ 2ND LANGUAGE BENGALI PROJECTS :

1. তোমার পাঠ্য পুস্তকের অন্তর্গত যেকোনো একটি কবিতাকে ছোট গল্পের রূপ দান করো।

2. তোমার পাঠ্য পুস্তকের অন্তর্গত যেকোনো একটি ছোট গল্পকে কবিতার রূপ দান করো।

3. তোমার পাঠ্য পুস্তকের অন্তর্গত যেকোনো একটি ছোট গল্প বা কবিতার বর্তমান সময়ের নিরিখে প্রাসঙ্গিকতা বিচার করো।
4. তোমার পাঠ্য পুস্তকের অন্তর্গত যেকোনো একটি ছোটগল্পের চরিত্র বিশ্লেষণ কর অথবা যেকোনো একটি কবিতার প্রেক্ষাপট আলোচনা কর।

Listening and speaking skill will be held in regular classes.

☐ MATHEMATICS : _____

Class : XII

❖ PRE-TEST EXAMINATION :

Section A:

Function, Matrix, determinants, Continuity, Derivatives, Application of Derivatives: Tangents and Normals

Section C:

Linear Programming Problem

❖ ASSESSMENT-I EXAMINATION:

Section A:

Relation, Inverse Trigonometry, Differentiability, Integrals (up to method of substitution), Application of Derivatives: Rate Measurement, Maxima & Minima

Section B:

Vectors, 3-Dimension Geometry (Straight Lines)

Section C:

Application of Calculus in commerce and economics

Note: All the chapters in Pre-Test are also included in 1st Assessment syllabus.

1st project should be submitted 15 days before examination.

❖ ASSESSMENT-II EXAMINATION:

Section A:

Application of Derivatives: Increasing & Decreasing functions, Error and Approximation, Integrals (remaining), Probability, Differential Equation.

Section B:

3-Dimensional Geometry (Planes),

Note: All the chapters in 1st Assessment are also included in 2nd Assessment.

Completed project file containing two projects should be submitted 15 days before examination.

❖ PERIODICAL EXAMINATION:

Section A:

Indeterminate forms, Application of Derivatives : Error and Approximation, Binary Operation.

Section B: Application of Calculus.

Section C: Linear Regression

Revision chapters: All chapters of Pretest, 1st Assessment & 2nd Assessment.

❖ **PRE-BOARD EXAMINATION:**

Full Syllabus

☐ **PHYSICS :** _____

Name of the book: ISC PHYSICS (RAJ KUMAR AND G. L. MITTAL)
Nageen Prakashan Pvt. Ltd

❖ **PRE-TEST EXAMINATION:**

1. Electric Charges and Fields
2. Gauss' Theorem
3. Electric Potential
4. Capacitors & Dielectrics
5. Electric Resistance and Ohm's Law
6. DC Circuits and Measurement

PRACTICAL AS PER ISC NORMS

❖ **ASSESSMENT-I EXAMINATION:**

1. Moving Charges and Magnetic Field
2. Torque on a Current loop: Moving Coil Galvanometer
3. Magnetic Field and Earth's Magnetism
4. Magnetic Classification of Substances
5. Electromagnetic Induction
6. Alternating Current
7. Electromagnetic Waves

FULL SYLLABUS OF PRETEST

PRACTICAL AS PER ISC NORMS

❖ **ASSESSMENT-II EXAMINATION:**

1. Reflection of Light – Spherical Mirrors
2. Refraction of Light at a Plane Interface
3. Refraction of Light at Spherical Surfaces - Lenses
4. Refraction and Dispersion of Light through a Prism
5. Optical Instruments
6. Wave Nature of Light – Huygens' Principle

FULL SYLLABUS OF PRETEST & ASSESSMENT 1

PRACTICAL AS PER ISC NORMS

❖ **PERIODICAL EXAMINATION:**

1. Interference of Light
2. Diffraction of Light

Class : XII

3. Polarization of Light
4. Photoelectric Effect
5. Matter Waves
6. X-Rays
7. Atom, Origin of Spectra

**FULL SYLLABUS OF PRETEST, ASSESSMENT 1 & 2
PRACTICAL AS PER ISC NORMS**

❖ **PRE-BOARD EXAMINATION:**

1. Nuclear Structure
2. Radioactivity
3. Mass Energy Equivalence
4. Nuclear Fission and Fusion
5. Semiconductor Electronics
6. Junction Diodes
7. Junction Transistors
8. Logic Gates
9. Communication Systems

FULL SYLLABUS

Project:- The students are advised to make a project based on any one of the topics for projects as advised/discussed by the subject teacher in school for ISC 2024-2025.

☐ **CHEMISTRY :** _____

Book: ISC Chemistry (K.L. CHUGH)

❖ **PRE-TEST EXAMINATION :**

Ch-10. Haloalkane and Haloarene
Ch- 14. Biomolecules
Ch – 8. d- & f- Block elements
Practical- Salt Analysis

❖ **ASSESSMENT-I EXAMINATION:**

Ch-.11 Alcohol, Phenol and Ethers
Ch- 2. Solution
Ch- 3 Electrochemistry
Ch- 13 Organic Compounds containing Nitrogen
Ch -6 General principles and process of isolation
Revision: Pre-test Syllabus
Practical: Titration

❖ **ASSESSMENT-II EXAMINATION :**

Ch-12 Aldehyde Ketone and Carboxylic Acid

Class : XII

Ch-4 . Chemical kinetics
 Ch-9 Coordination Compounds
 Ch – 15 Polymers
 Ch -16 Chemistry in every Day life
 Ch -7 P-block element
 Revision: Pre-test + First Assessment Syllabus
 Practical: Identification of Organic salt

❖ **PERIODICAL EXAMINATION:**

Ch- 1 Solid State
 Ch- 5 Surface Chemistry
 Revision: Pre-test + First + Second Assessment Syllabus
 Practical : 1st assessment + 2nd assessment + salt analysis

❖ **PRE-BOARD EXAMINATION :**

Full ICSE Class-XII Syllabus
 Practical: Full Syllabus

Project

Project:- The students are advised to make a project based on any one of the topics for projects as advised/discussed by the subject teacher in school for ISC 2024-25.

☐ **BIOLOGY :** _____

❖ **PRE-TEST EXAMINATION :**

Reproduction

1. Reproduction in organisms
2. Sexual reproduction in flowering plants
3. Human reproduction
4. Reproductive health

❖ **ASSESSMENT-I EXAMINATION:**

Genetics and evolution

1. Heredity and variations
2. Molecular basis of inheritance
3. Evolution

Biology and human welfare

1. Health and disease
- Practical: As per ISC curriculum

❖ **ASSESSMENT-II EXAMINATION :**

Biology and Human Welfare

1. Improvement in food production
2. Microbes in human welfare

Biotechnology and it's application

1. Principles and processes of biotechnology
2. Application of bio-technology in health and agriculture

Practical: As per ISC curriculum

❖ **PERIODICAL EXAMINATION :****Ecology and environment**

1. Organisms and environment
2. Ecosystem
3. Biodiversity and it's conservation
4. Environmental issues

Practical: As per ISC curriculum

❖ **PRE-BOARD EXAMINATION :**

Entire syllabus of ISC class XII

☐ **COMPUTER SCIENCE :** _____

**BOOK : Understanding ISC COMPUTER SCIENCE (Java with Blue)
(AVICHAL PUBLISHING COMPANY)**

❖ **PRE-TEST EXAMINATION :**

Ch 1 : Boolean Algebra

Ch 2 : Computer Hardware

Ch 4 : Objects and classes

Ch 5 : Data types and variables

Ch 6 : Statements and Scope

Ch 9 : Methods (Functions)

❖ **ASSESSMENT-I EXAMINATION:**

Ch 1, 2, 4, 5, 6 and 9 (Revision)

Ch 3 : Implementation of Algorithm to solve problems

Ch 7 : String Manipulations

Ch 8 : Arrays

Ch 10 : Class as User Defined and Constructors

Ch 11 : Recursion

PRACTICAL:

- Ch 3 to Ch 11

❖ **ASSESSMENT-II EXAMINATION :**

Ch 1 to Ch 11 (Revision)

Ch 12 : Inheritance, Interfaces and Polymorphism

Ch 13 : Data Structures

Ch 14 : Computational complexity and Big O Notation

PRACTICAL:

- Ch 3 to Ch 12

❖ **PERIODICAL EXAMINATION :**

ENTIRE CLASS - XII SYLLABUS

Everything mention in ISC regulation and Syllabus book of 2025.

❖ **PRE-BOARD EXAMINATION :**

ENTIRE CLASS - XII SYLLABUS

Everything mention in ISC regulation and Syllabus book of 2025.

PRACTICAL:

ENTIRE CLASS - XII SYLLABUS

Everything mention in ISC regulation and Syllabus book of 2025.

☐ **SUPW :** _____

❖ **ASSESSMENT-II EXAMINATION:**

Subsidiary Service

1. THERMOCOL DESIGN SCROLL.
2. CALENDER MAKING.
3. WALL HANGING.
4. DUSTER MAKING.

❖ **PRE-BOARD EXAMINATION :**

Main craft service

5. CHALK MAKING.
6. FOOD SALAD.
7. TIE AND DIE

☐ **PHYSICAL TRAINING (PT) :** _____

❖ **ASSESSMENT-II EXAMINATION:**

- Mountain climber.
- Plank Jack.
- Battery Test.
- Push-ups.
- Burpees.
- Holding Crunch.
- Holding Squat.
- Sit-ups.
- First -Aid.

Class : XII

- Basketball.
- Football.
- Chess.
- Kabaddi.

☐ **YOGA (MEDITATION) :** _____

❖ **ASSESSMENT-II EXAMINATION:**

- Calvicular breathing
- Abdominal breathing
- Thoracic Breathing
- Anulom -vilom
- Bhastrika
- Simhasana
- Trikonasana
- Hastottanasana
- Dhanurasana
- Ushtrasana
- Kapalbhati
- Uddyan
- Meditation

Class : XII

