



AUROBINDO INTERNATIONAL SCHOOL

(Affiliated to CBSE, Affiliation No. 1730992)

Near Royal Green's App. Sirsi Road, Jaipur. Phone: 0141-2240823/339, 8696906815

Email: info@aisraj.org, admission@aisraj.org, Website: www.aisraj.org

Session 2024-2025

Class XII

Subject : English

BOOKS: Flamingo/Vistas

Ch.No.	Ch. Name	Month	PA I 20 Marks	Half Yearly (80)	Pre- Board I (80)	Pre- Board II (80)	Pre- Board III (80)
WRITING							
	Notice Writing	April/May	√	√	√	√	√
	Invitations	April/May	√	√	√	√	√
	Letter to the editor	May		√	√	√	√
	Job Application	August		√	√	√	√
	Article Writing	July		√	√	√	√
	Report Writing	August		√	√	√	√
Flamingo							
Unit 1	The Last Lesson	March	√	√	√	√	√
Unit 2	Lost Spring	March	√	√	√	√	√
Unit 3	Deep Water	May		√	√	√	√
Unit 4	The Rattrap	July		√	√	√	√
Unit 5	Indigo	July		√	√	√	√
Unit 6	Poets and Pancakes	September			√	√	√
Unit 7	The Interview	August		√	√	√	√
Unit 8	Going Places	September			√	√	√
POEM							
	My Mother at Sixty-six	May		√	√	√	√
	Keeping Quiet	July		√	√	√	√
	A Thing of Beauty	July		√	√	√	√
	A Roadside Stand	September			√	√	√
	Aunt Jennifer's Tigers	May			√	√	√
Vistas							
Ch-1	The Third Level	April	√	√	√	√	√
Ch-2	The Tiger King	April	√	√	√	√	√
Ch-3	Journey to the end of the Earth	May		√	√	√	√
Ch-4	The Enemy	August		√	√	√	√
Ch-6	On the face of It	August		√	√	√	√
Ch-8	Memories of Childhood	September			√	√	√

INTERNAL MARKING

Assessment of Listening Skills	05
Assessment of Speaking Skills	05
Project Work	10
	20

Question Paper Design 2024-25 English

Section	Competencies	Total marks
Reading Skills	Conceptual understanding, decoding, Analyzing, inferring, interpreting, appreciating, literary, conventions and vocabulary, summarizing and using appropriate format/s.	26
Creative Writing Sills	Conceptual Understanding, application of rules, Analysis, Reasoning, appropriacy of style and tone, using appropriate format and fluency, inference, analysis, evaluation and creativity.	23
Literature Text Books and Supplementary Reading Texts	Recalling, reasoning, appreciating literary convention, inference, analysis, creativity with fluency, Critical Thinking.	31
	TOTAL	80



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Session 2024-2025

Class XII

Subject: Biology

Book Name: Biology Class XII (NCERT)

Subject : Science Biology							
Ch.No.	Ch. Name	Month	PA I 20 Marks	Half Yearly (70)	Pre- Board I (70)	Pre- Board II (70)	Pre-Board III (70)
Chapter-1	Sexual Reproduction in Flowering Plants	April	√	√	√	√	√
Chapter-2	Human Reproduction	April/May	√	√	√	√	√
Chapter-3	Reproductive Health	May		√	√	√	√
Chapter-4	Principles of Inheritance and Variation	July		√	√	√	√
Chapter-5	Molecular Basis of Inheritance	July		√	√	√	√
Chapter-6	Evolution	August			√	√	√
Chapter-7	Human Health and Diseases	August		√	√	√	√
Chapter-8	Microbes in Human Welfare	September		√	√	√	√
Chapter-9	Biotechnology Principles and Processes	October			√	√	√
Chapter-10	Biotechnology and its Application	October			√	√	√
Chapter-11	Organisms and Populations	November			√	√	√
Chapter-12	Ecosystem	November			√	√	√
Chapter-13	Biodiversity and Conservation	November			√	√	√

SUBJECT- BIOLOGY PRACTICAL

Sr. No.	Practical	Month
1	<ul style="list-style-type: none">Prepare a temporary mount of onion root tip to study mitosis.Study pollen germination on a slide.Flowers adapted to pollination by different agencies (wind, insects, birds).Pollen germination on stigma through a permanent slide or scanning electron microscope.Controlled pollination - emasculation, tagging and bagging.	April
2	<ul style="list-style-type: none">Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice).Meiosis in onion bud cell or grasshopper testis through permanent slides.T.S. of blastula through permanent slides (Mammalian).	May

3	<ul style="list-style-type: none"> • Mendelian inheritance using seeds of different colour/sizes of any plant. • 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. 	July
4	<ul style="list-style-type: none"> • Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides or specimens. Comment on symptoms of diseases that they cause. • Study of homologous and analogous organs. 	August
5	<ul style="list-style-type: none"> • Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc. 	October
6	<ul style="list-style-type: none"> • Study the plant population density by quadrat method. • Study the plant population frequency by quadrant method. • Study of symbiotic association in root nodules of leguminous plants, Cuscuta on host, lichens. 	November

Subject: Chemistry (Code No. 043)

Prescribed Books:

- 1. Chemistry Part-I, Text book for Class XII, Published by NCERT**
- 2. Chemistry Part-II, Textbook for Class XII, Published by NCERT**

Unit No.	Unit Name with Chapter No. and Name	Month	PA-I 20 Marks	Half Yearly 70 Marks	Pre- Board I (70)	Pre- Board II (70)	Pre- Board III (70)
Unit-I	Solutions	May	√	√	√	√	√
Unit-IV	d -and f -Block Elements	May	√	√	√	√	√
Unit-V	Coordination Compounds	July		√	√	√	√
Unit-X	Biomolecules	July		√	√	√	√
Unit-II	Electrochemistry	August		√	√	√	√
Unit-III	Chemical Kinetics	September/ October			√	√	√
Unit-VI	Haloalkanes and Haloarenes	October/ November			√	√	√
Unit-VII	Alcohols, Phenols and Ethers	November			√	√	√
Unit-VIII	Aldehydes, Ketones and Carboxylic Acids	November/ December			√	√	√
Unit-IX	Amines	December			√	√	√

PRACTICAL SYLLABUS

Evaluation Scheme for Practical Examination

Time: 3Hours

Total Marks: 30

Evaluation Scheme for Examination	Marks
Volumetric Analysis	08
Salt Analysis	08
Content Based Experiment	06
Project Work	04
Class record and viva	04
Total	30

PRACTICAL SYLLABUS 60 Periods

Micro-chemical methods are available for several of practical experiments. Wherever possible, such techniques should be used.

A. Surface Chemistry

- Preparation of one lyophilic and one lyophobic sol

Lyophilic sol - starch, egg albumin and gum

Lyophobic sol - aluminium hydroxide, ferric hydroxide, arsenous sulphide.

(b) Dialysis of sol-prepared in (a) above.

(c) Study of the role of emulsifying agents in stabilizing the emulsion of different oils.

B. Chemical Kinetics

(a) Effect of concentration and temperature on the rate of reaction between Sodium Thiosulphate and Hydrochloric acid.

(b) Study of reaction rates of any one of the following:

(i) Reaction of Iodide ion with Hydrogen Peroxide at room temperature using different concentrations of Iodide ions.

(ii) Reaction between Potassium Iodate, (KIO_3) and Sodium Sulphite: (Na_2SO_3) using starch solution as an indicator (clock reaction).

C. Thermochemistry

Any one of the following experiments

(a) Enthalpy of dissolution of Copper Sulphate or Potassium Nitrate.

(b) Enthalpy of neutralization of strong acid (HCl) and strong base (NaOH).

(c) Determination of enthalpy change during interaction (Hydrogen bond formation) between Acetone and Chloroform.

D. Electrochemistry

Variation of cell potential in $\text{Zn}/\text{Zn}^{2+} || \text{Cu}^{2+}/\text{Cu}$ with change in concentration of electrolytes (CuSO_4 or ZnSO_4) at room temperature.

E. Chromatography

(a) Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of R_f values.

(b) Separation of constituents present in an inorganic mixture containing two cations only (constituents having large difference in R_f values to be provided).

F. Preparation of Inorganic Compounds

Preparation of double salt of Ferrous Ammonium Sulphate or Potash Alum. Preparation of Potassium Ferric Oxalate.

G. Preparation of Organic Compounds

Preparation of any one of the following compounds

i) Acetanilide ii) Di-benzalacetone iii) p-Nitroacetanilide iv) Aniline yellow or 2-Naphthol Anilinedye.

H. Tests for the functional groups present in organic compounds:

Unsaturation, alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (Primary) groups.

I. Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given foodstuffs.

J. Determination of concentration/ molarity of KMnO_4 solution by titrating it against a standard solution of:

(a) Oxalic acid,

(b) Ferrous Ammonium Sulphate

(Students will be required to prepare standard solutions by weighing themselves).

K. Qualitative analysis

Determination of one anion and one cation in a given salt

Cation:

Pb²⁺, Cu²⁺, As³⁺, Al³⁺, Fe³⁺, Mn²⁺, Zn²⁺, Ni²⁺, Ca²⁺, Sr²⁺, Ba²⁺, Mg²⁺, NH₄⁺

Anions:

(CO₃)²⁻, S²⁻, (SO₃)²⁻, (NO₂)⁻, (SO₄)²⁻, Cl⁻, Br⁻, I⁻, (PO₄)³⁻, (C₂O₄)²⁻, CH₃COO⁻, NO₃⁻

(Note: Insoluble salts excluded)

INVESTIGATORY PROJECT

Scientific investigations involving laboratory testing and collecting information from other sources A few suggested Projects.

- Study of the presence of oxalate ions in guava fruit at different stages of ripening.
- Study the quantity of casein present in different samples of milk.
- Preparation of soybean milk and its comparison with natural milk with respect to curd formation, the effect of temperature, etc.
- Study of the effect of Potassium Bisulphate as a food preservative under various conditions (temperature, concentration, time, etc.)
- Study of digestion of starch by salivary amylase and effect of pH and temperature on it.
- Comparative study of the rate of fermentation of the following materials: wheat flour, gram flour, potato juice, carrot juice, etc.
- Extraction of essential oils present in Saunf (aniseed), Ajwain (carum), Illaichi (cardamom).
- Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chilli powder and pepper.

SUBJECT: PHYSICS (042)**BOOK NAME- NCERT VOL. I & VOL.2**

Ch. No.	Chapter Name	Month	PA-I 20 Marks	Half Yearly 70 Marks	Pre-Board I (70)	Pre-Board II (70)	Pre-Board III (70)
1	Electric Charges and Fields	April	√	√	√	√	√
2	Electrostatic Potential and Capacitance	April/ May	√	√	√	√	√
3	Current Electricity	May/ July		√	√	√	√
4	Moving Charges and Magnetism.	July		√	√	√	√
5	Magnetism and Matter	July		√	√	√	√
6	Electromagnetic Induction	August		√	√	√	√
7	Alternating Current	August		√	√	√	√
8	Electromagnetic Waves	August			√	√	√
9	Ray Optics and Optical Instruments.	September/ October			√	√	√
10	Wave Optics	October			√	√	√
11	Dual Nature of Radiation and Matter.	November			√	√	√
12	Atoms	November			√	√	√
13	Nuclei	November			√	√	√
14	Semiconductor Electronics Materials Devices and Simple Circuit	November			√	√	√

PHYSICS PRACTICAL (042)

Sr. No.	Name of the Experiment	Month
1	To find resistance of a given wire/standard resistor by using metre bridge.	May
2	To verify the laws of combination of resistances in series using a metre bridge (slide wire bridge) OR To verify the laws of combination of resistances in parallel using a metre bridge (slide wire bridge).	May
3	To determine resistance of a galvanometer by half deflection method and to find its figure of merit.	July
4	To convert the given galvanometer of known resistance and figure of merit into a voltmeter of desired range and verify the same.	July
5	To find the value of v for different values of u in case of a concave mirror and to find the focal length.	August
6	To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$.	October
7	To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and the angle of deviation.	November
8	To draw the I-V characteristic curve of a p-n junction in forward-bias and reverse-bias.	November

PHYSICS (THEORY)

Time: 3 hrs.

Max Marks: 70

		Marks
Unit-I	Electrostatics	16
Unit-II	Current Electricity	
Unit-III	Magnetic Effects of Current and Magnetism	17
Unit-IV	Electromagnetic Induction and Alternating Currents	
Unit-V	Electromagnetic Waves	18
Unit-VI	Optics	
Unit-VII	Dual Nature of Radiation and Matter	12
Unit-VIII	Atoms and Nuclei	
Unit-IX	Electronic Devices	7
Total		70

PRACTICAL EVALUATION SCHEME

Time 3 hours

Max. Marks: 30

Topic	Marks
Two experiments one from each section	7+7
Practical record (experiment and activities)	5
One activity from any section	3
Investigatory Project	3
Viva on experiments, activities and project	5
Total	30



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Class XII

Subjects :- Mathematics

Ch.No.	Ch. Name	Month	PA I 20 Marks	Half Yearly (80)	Pre- Board I (80)	Pre- Board II (80)	Pre- Board III (80)
Unit-I: Relations and Functions							
Ch-1	Relations and Functions	April	√	√	√	√	√
Ch-2	Inverse Trigonometric Functions	April	√	√	√	√	√
Unit-II: Algebra							
Ch-3	Matrices	April		√	√	√	√
Ch-4	Determinants	April		√	√	√	√
Unit-III: Calculus							
Ch-5	Continuity and Differentiability	April/May		√	√	√	√
Ch-6	Applications of Derivatives	July		√	√	√	√
Ch-7	Integrals	July		√	√	√	√
Ch-8	Applications of Integrals	August		√	√	√	√
Ch-9	Differential Equations	August		√	√	√	√
Unit-IV: Vectors and Three-dimensional Geometry							
Ch-10	Vector Algebra	August			√	√	√
Ch-11	Three-Dimensional Geometry	October			√	√	√
Unit-V: Linear Programming							
Ch-12	Linear Programming	October			√	√	√
Unit-VI Probability							
Ch-13	Probability	October/ November			√	√	√

No.	Units	No. of Periods	Marks
I.	Sets and Functions	60	23
II.	Algebra	50	25
III.	Coordinate Geometry	50	12
IV.	Calculus	40	08
V.	Statistics and Probability	40	12
	Total	240	80
	Internal Assessment		20



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Class XII

Subjects :- Applied Mathematics

Ch.No.	Ch. Name	Month	PA I 20 Marks	Half Yearly (80)	Pre- Board I (80)	Pre- Board II (80)	Pre- Board III (80)
Ch-3	Matrix	April	√	√	√	√	√
Ch-4	Determinants	April	√	√	√	√	√
Ch-1	Numbers	May/July		√	√	√	√
Ch-2	Numerical Inequality	July		√	√	√	√
Ch-5	Differentiation	July/August		√	√	√	√
Ch-6	Applications of Derivatives	August		√	√	√	√
Ch-8	Differential Equations	August		√	√	√	√
Ch-9	Probability	October			√	√	√
Ch-7	Integrals	September October			√	√	√
Ch-10	Statistics	October			√	√	√
Ch-11	Time Base Data	November			√	√	√
Ch-12	Perpetuity, Sinking & EMI	November			√	√	√
Ch-13	Return & Growth	December			√	√	√
Ch-14	Linear Programming	December			√	√	√



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Class XII

Subject: Informatics Practices

Book Name: Informatics Practices XII

Subject : Informatics Practices							
Ch.No.	Ch. Name	Month	PA I (20)	Half Yearly (70)	Pre Board I (70)	Pre Board II (70)	Pre Board III (70)
Ch-1	Python Pandas-I	April	√	√	√	√	√
Ch-2	Python Pandas-II	May		√	√	√	√
Ch-3	Plotting with PyPlot	July		√	√	√	√
Ch-4	Importing/Exporting Data between CSV Files/MySQL and Pandas	April/May	√	√	√	√	√
Ch-5	MySQL Revision Tour	October			√	√	√
Ch-6	My SQL Functions	October			√	√	√
Ch-7	Querying Using SQL	November			√	√	√
Ch-8	JOINS and SET Operations	November			√	√	√
Ch-9	Introduction to Computer Networks	July		√	√	√	√
Ch-10	Introduction to Internet and Web	August		√	√	√	√
Ch-11	Societal Impacts	August		√	√	√	√

Theory Marks Distribution

Unit No	Unit Name	Marks
1	Data Handling using Pandas and Data Visualization	25
2	Database Query using SQL	25
3	Introduction to Computer Networks	10
4	Societal Impacts	10
	Practical	30
	Total	100

Practical Marks Distribution

S.No.	Unit Name	Marks
1	Programs using Pandas and Matplotlib	8
2	SQL Queries	7
3	Practical file (minimum of 15 programs based on Pandas, 4 based on Matplotlib and 15 SQL queries must be included)	5
4	Project Work (using concepts learned in class XI and XII)	5
5	Viva-Voce	5
	Total	30