## Guru Nanak International Public (Senior Secondary) School Model Town, Ludhiana Syllabus for Class-XII (Science Stream) Session - 2024-25

## **TERMS:**

### Classes I to V

The whole syllabus will be divided into 4 periodic units.

Periodic Test 1 - May

Periodic Test 2 - September

Periodic Test 3 - December

Periodic Test 4 - March

### Classes VI to X

- 1. No Semester System
- 2. Final Evaluation will be based on Annual Examination (Board Exams for class X) & Internal Assessment.
- 3. Full syllabus exam at the end of the session for classes IX & X.
- 4. 75% syllabus exam at the end of the session for classes VI to VIII.
- 5. 3 Periodic Tests will be conducted as per the following schedule:

Term		Month
Periodic Test 1	-	May
Half Yearly	-	September
Periodic Test 2	-	December
Annual	_	March

(XII-Science) 1

- 6. Weightage division will be as follows:
- \* 80% marks exam & 20% marks internal assessment for each subject.
- Internal Assessment will comprise of Periodic Tests, Subject Enrichment Activities, Notebook maintenance & Discipline.

### Classes XI & XII

- 1. Annual Examination (Board Exam for Class XII) will take place at the end of the session covering the Syllabus. Besides, 3 periodic tests will be held as mentioned above.
- 2. For Class XI, 40% of marks obtained by a child in Periodic Tests, Half Yearly & 60% of marks obtained in Examination are carried for the final consolidated result of the child.

Note: A student must get 40% marks in each subject & in aggregate to qualify himself/ herself for promotion to the next class

Syllabus of Class XII - Science Stream Session (2024-25) APRIL			
	<u>ENGLISH</u>		<u>CHEMISTRY</u>
Books Prescribed Section - A Section - B	<ul> <li>: 1. Flamingo</li> <li>: Comprehension Passage</li> <li>: Notice Writing     Invitations     Report (for Newspaper)     Article Writing     Application for Job</li> </ul>	Unit I : Unit II :	NCERT Chemstiry for XII Modern abc of Chemistry  Solution Electrochemistry Detection of Functional Groups of Organic Compounds
Section - C Flamingo	: The Last Lesson		BIOLOGY
Poetry Vistas	Lost Spring The Rattrap Indigo : My Mother at Sixty-Six Keeping Quiet : The Third Level The Enemy	Book Referred : Biology - A Text book for Class XII (NCERT)  Chapter 1 : Sexual Reproduction in flowering plants Chapter 2 : Human Reproduction Chapter 3 : Reproductive Health  Practicals : 1. To study pollen germination on a slide (temporary mount)	Sexual Reproduction in flowering plants Human Reproduction Reproductive Health
	<u>PHYSICS</u>		3. To study gametogenesis by permanant slides. 4. V.S. Blastula
Book Referred	<ul> <li>1. New Simplified Physics by S.L. Arora for XII (Vol. I and Vol II)</li> <li>2. Comprehensive Practical Physics for Class 12</li> </ul>	4. v.S. Biastula 5. Emasculation and Bagging	
Unit - 1	: Chapter 1 - Electric Charges and Fields Chapter 2 - Electrostatic Potential & Capacitance		
Unit - 6	: Chapter 9 - Ray optics & optical Instruments. Chapter 10 - Wave Optics		
Practical	: 1. To find the value of v for different values of u in case of concave mirror and to find focal length 2. To find focal length of a convexlens by plotting graph between u and v or between 1/u and 1/v		

MATHEMATICS	HINDUSTANI MUSIC VOCAL
Books Referred : A textbook of Class - XII	Books Referred Theory Practical Swar Gyan Theory Brief Study of Alankar, Alap, Taan, Meend, Gamak 1) Jhap taal 2) One Drut Khayal in Raag Bageshwari 3) Alankars in Jhap taal and Raag Bageshwari
PHYSICAL EDUCATION  Book: Candid, Text book of Physical Education (Ever Green Publication) Unit-I Management of Sporting Events Unit-X Training in Sports Physical Fitness Test: SAI Khelo India Test Brockport Physical Test  INFORMATION TECHNOLOGY  Books Prescribed: 1) Database Management Applications 2) Employability Skills IV by CBSE-XII Part-B: Unit 1 Database Concepts	Books Referred : Panoramic Indian Painting Unit-1 : A) The Rajasthani School of Miniature Painting 1) Origin and Development 2) Sub Schools 3) Main Features 4) Appreciation of the following Rajasthani Paintings: (i) Marn-Ragini (ii) Chaugan Player (iii) Krishna on Swing (iv) Radha (Bani-Thani) (v) Bharat meets Rama at Chitrakoot
FINANCIAL MAREKTS MANAGEMENT  Books Prescribed : 1) Financial Markets Management (NSQF Level-4) Employability Skills Class XII  Chapter 1 : Introduction to Indian Securities Market and Trading Membership  Employability Skills : Unit - 1 Practical : NSE SMART	APRIL TO JULY  STRAND-I (I. Athletics II. Games) Activity: I. Warming up and conditioning exercise. II. Track and field event. III. Types of Start, Types of event, Technique of event IV. Games: i) Basketball iii) Softball ii) Football iv) Volleyball v) Badminton vi) Baseball  Periodic Test-I

Syllabus of Class XII - Science Stream Session (2024-25) MAY			
	<u>ENGLISH</u>		<u>CHEMISTRY</u>
Section - A Section - C	: Comprehension Passage : Vistas : On the Face of it	Unit III Unit IV	: Chemical Kinetics : d & f Block Elements
	Periodic Test - I		Periodic Test - I
		Chapter 4	BIOLOGY  : Principles of Inheritance and Variations
		Chapter 5 Practicals	<ul> <li>: Molecular Basis of Inheritance</li> <li>: 1. To study Pedigree Charts</li> <li>2. To study Laws of Inheritance</li> </ul>
	<u>PHYSICS</u>		May Unit Test-I
Unit - 9 Materials, Devi Unit - 2	: Chapter 14 - Semiconductor Electronics : ices and Simple Circuits : Chapter 3 - Current Electricity		
	Periodic Test - I		

<u>MATHEMATICS</u>	HINDUSTANI MUSIC VOCAL
Chapter 6 : Application of Derivatives Chapter 1 : Relation and Functions  Periodic Test - I	Theory : Knowledge of tuning of tanpura  Periodic Test - I  PAINTING
PHYSICAL EDUCATION  Unit-II : Children & Women in Sports : Yoga as preventive measure for lifestyle disease  Periodic Test-I  INFORMATION TECHNOLOGY  Part-B : Unit 2 Operating Web Based Applications Part-A : Unit 1 Communication Skills	B) The Pahari School of Miniature Painting 1) Origin and Development 2) Sub-Schools 3) Main Features 4) Appreciation of the following Paintings: (i) Krishna with Gopis (ii) Nand, Yashoda and Krishna with Kinsmen going to Vrindavana Periodic Test-I
May Unit Test  FINANCIAL MAREKTS MANAGEMENT  Chapter 2 : Trading Employability Skills : Unit - 2 Practical : NSE SMART Periodic Test 1	HEALTH AND PHYSICAL-EDUCATION [HPE]  APRIL TO JULY  STRAND-I (I. Athletics II. Games)  Activity : I. Warming up and conditioning exercise.  II. Track and field event.  III. Types of Start, Types of event, Technique of event  IV. Games: i) Basketball iii) Softball  ii) Football iv) Volleyball  v) Badminton vi) Baseball  Periodic Test-I

#### Syllabus of Class XII - Science Stream Session (2024-25) **JULY ENGLISH CHEMISTRY** Section - A : Comprehension Passage Unit V : Co-ordination Compounds : Haloalkanes and Haloarenes Unit VI : Detection of functional group in given organic : Invitations (Replies) **Practicals** Section - B Article compounds. Report Section - C Flamingo : Deep Water Poets & Pancakes Interview **Poetry** : Aunt Jennifer's Tigers : The Tiger King Vistas **BIOLOGY** Chapter 6 : Evolution Chapter 7 : Microbes in Human Welfare To prepare temporary mount of onion root tip to **Practicals:** study mitosis. To study homologous & analogous organs. **PHYSICS** Unit - 3 : Chapter 4 - Moving Charges and Magnetism **Chapter 5 - Magnetism and Matter** : 3. To determine angle of minimum deviation of a Practical given prism. 4. To draw the I-V characteristic curve for a p-n junction diode.

<u>MATHEMATICS</u>	HINDUSTANI MUSIC VOCAL
Chapter 2 : Inverse Trigonometric Functions Chapter 10 : Vector Algebra Chapter 11 : Three Dimensional Geometry	Theory Practical : Historical Development of Time Theory of Raags : 1) Vilambit Khayal in Raag Bageshwari 2) Rupak Taal on hand beats 3) Alankars in rupak taal
	<u>PAINTING</u>
PHYSICAL EDUCATION	Unit - 2 :
Unit - IV : Physical Education & Sports for (CWSN) Unit - V : Sports & Nutrition Record File Practical I : Fitness Test Administration Practical II : Procedure for Asana, benefits & Contraindication for any two asana for each lifestyle disease.  INFORMATION TECHNOLOGY  Part - B : Unit 3 Fundamentals of Java Programming	A) The Mughal School of Miniature Painting  1) Origin and Development  2) Main Features  3) Appreciation of the following paintings  (i) Krishna lifting Mount Govardhana  (ii) Kabir and Raidas  (iii) Falcon on a Bird Rest  (iv) Marriage procession of Darashikoh
FINANCIAL MAREKTS MANAGEMENT  Chapter 2 : Trading Employability Skills: Unit-3 Practical : NSE SMART	HEALTH AND PHYSICAL-EDUCATION [HPE]  APRIL TO JULY STRAND-I (I. Athletics II. Games) Activity: I. Warming up and conditioning exercise. II. Track and field event. III. Types of Start, Types of event, Technique of event IV. Games: i) Basketball iii) Softball ii) Football iv) Volleyball v) Badminton vi) Baseball Periodic Test-I

### Syllabus of Class XII - Science Stream Session (2024-25) **AUGUST ENGLISH CHEMISTRY** Section - A : Comprehension Passage Unit VII : Alcohols, Phenols & Ethers : Editorial Letters Section - B **Unit VIII** : Aldehydes, ketones & carboxylic acids Section - C Flamingo : Going Places : Salt Analysis **Practical** : A Roadside Stand Poem Vistas : Journey to the End of the Earth **Art Integrated Activity & Project BIOLOGY** ALS (Assessment of Listening & Speaking Skills & Project) Chapter 8 : Human Health and diseases Practicals : 1. To Study disease causing organisms. **PHYSICS** : Chapter 6 - Electromagnetic Induction Unit - 4 **Chapter 7 - Alternating Currents Practical** : 5. To determine resistivity of wires by plotting a graph for potential difference versus current 6. To find resistance of a wire using metre bridge.

<u>MATHEMATICS</u>	<u>PAINTING</u>
Chapter 7 : Integrals Chapter 8 : Applications of Integrals Chapter 9 : Differential Equations	B) The Deccan School of Miniature Painting 1) Origin and Development 2) Main Features 3) Appreciation of the following Paintings: (i) Hazrat Nizamuddin Auliya and Amir Khusro (ii) Chand Bibi Playing Polo
PHYSICAL EDUCATION	(II) Chand Biol Playing Polo
Unit VI : Test & Measurement in Sports Unit VII : Physiology & Injuries in Sports Yogic Exercise	
INFORMATION TECHNOLOGY	HEALTH AND PHYSICAL-EDUCATION [HPE]
Part-A : Unit 2 Self-Management Skills Unit 3 Basic ICT Skills	AUG. TO OCT.  STRAND - II (Health and Fitness)  Part - I  Activity: I. Mass P.T. Yoga, Jogging, Aerobic
FINANCIAL MAREKTS MANAGEMENT	II. Technique of Start, Finishing III. Technique of Track & Field Events
Chapter 3 : Clearing and Settlement Legal Framework Chapter 4 : Financial Statement Analysis Employability Skills: Unit - 3 Practical : NSE SMART	Part - II Health and Activity Record Fitness Components Fitness Parameters Test Name Health Components Body Composition Muscular Strength Partial Curl Up Modified Pushups
HINDUSTANI MUSIC VOCAL	Pushups Flexibility Sit and Reach Test
Theory  : 1) Detailed study of Sangeet Ratnakar  2) Life Sketch of Faiyaz Khan, Bade Gulam Ali Khan and Krishna Rao Shankar Pandit  Practical  : 1) One Drut Khayal in Raag Bhairav  2) One Tarana in Raag Bhairav  3) Alankars in Raag Bhairav	Endurance 600 Mt Run Balance Flamingo Balance Test Skill Components Agility Shuttle Run Speed Sprint/Dash Power Standing/Vertical Jump Coordination Plate Tapping Toss Test, Handball

## Syllabus of Class XII - Science Stream Session (2024-25) **SEPTEMBER ENGLISH CHEMISTRY** First term Examination **First Term Examination BIOLOGY** Chapter 9 : Biotechnology - Principles and Processes Chapter 10 : Biotechnology and its applications Practicals : To isolate DNA from a given plant material. **First Term Examination PHYSICS** Unit - 5 : Chapter 8 - Electromagnetic Waves Unit - 7 : Chapter 11 - Dual Nature of Radiation and Matter First Term Examination

	<u>MATHEMATICS</u>	HIN	DUSTANI MUSIC	VOCAL
Chapter 12	: Linear Programming	Practical : D	Dhamar Taal on hand bea	its
	First Term Examination	First Term Examinati	on	
			<b>PAINTING</b>	
	PHYSICAL EDUCATION	First Term Examinat	ion	
First Term Exam	nination	That ICIM Examinat	ion	
		HEALTH AN	D PHYSICAL-ED	UCATION [HPE]
			AUG. TO OCT.	
IN	FORMATION TECHNOLOGY	STRAND - II (Health	and Fitness) Part - I	
First Term Exam	nination	Activity : I.	Mass P.T. Yoga, Joggir	ıg,Aerobic
		II.	Technique of Start, Fin	nishing
		III	. Technique of Track &	Field Events
			Part - II Health and Activity Re	and
		Fitness Components	Fitness Parameters	Test Name
		Health Components	Body Composition	BMI
		•	Muscular Strength	Partial Curl Up
EINLAR	ALCULA I INVAINTEIZORO NVANIA CUENVENUE	-		Modified Pushups
FINAL	NCIAL MAREKTS MANAGEMENT	4	Flexibility	Pushups Sit and Reach Test
   First Term Exam	nination		Endurance	600 Mt Run
			Balance	Flamingo Balance
			Test	_
		Skill Components	Agility	Shuttle Run
			Speed Power	Sprint/Dash Standing/Vertical Jump
			Power Coordination	Plate Tapping
			Cool amation	Toss Test, Handball

	Syllabus of Class XII - Science Stream Session (2024-25) OCTOBER		
	<u>ENGLISH</u>		<u>CHEMISTRY</u>
Section - A Section - B Section - C Flamingo Vistas	<ul> <li>: Comprehension Passage</li> <li>: Report (For School Magazine)</li> <li>: A Thing of Beauty</li> <li>: Memories of Childhood</li> </ul>	Unit IX Unit X Practicals	<ul> <li>: Organic componds containing nitrogen</li> <li>: Biomolecules</li> <li>: Revision</li> </ul>
			BIOLOGY
		Chapter 11 Chapter 12 Chapter 13 Practicals	<ul> <li>: Organisms and Populations</li> <li>: Ecosystem</li> <li>: Bio-diversity and its Conservation</li> <li>: <ul> <li>1. Study of population density &amp; frequency of plants by quadrat method.</li> </ul> </li> <li>2. To study plant interactions.</li> </ul>
	<u>PHYSICS</u>		
Unit - 8	: Chapter 12 - Atoms Chapter 13 - Nuclei		
Practical	<ul> <li>7. To verify the laws of combination (series) of resistances using a metre bridge.</li> <li>8. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.</li> </ul>		

<u>MATHEMATICS</u>	HIN	DUSTANI MUSIC	VOCAL
Chapter 13 : Probability	Theory :	1) Brief Study of Gram, Murki	Murchhana, Kan, Khatka,
PHYSICAL EDUCATION	2) Detailed Study of Sangeet Parijaat Practical: 1) One Drut Khayal in Raag Malkauns 2) One Dhamar in Raag Malkauns 3) Alankars in Raag Malkauns and Rup		
Unit VIII : Biomechanics & Sports Unit IX : Psychology & Sports Viva Voice (Health/ Games/ Sports/ Yoga)		g Malkauns	
INFORMATION TECHNOLOGY	]		
Part-B : Unit 4 Work Integrated Learning IT-DMA Part-A : Unit 4 Entrepreneurship Skills Part-A : Unit 5 Green Skills			
FINANCIAL MAREKTS MANAGEMENT	HEALTH AN	D PHYSICAL-EDU	UCATION [HPE]
Chapter 5 : Introduction to Derivatives Chapter 6 : Future Contracts, Mechanism and Pricing Employability Skills: Unit - 4 & 5 Practical : NSE SMART	AUG. TO OCT.  STRAND - II (Health and Fitness)  Part - I  Activity: I. Mass P.T. Yoga, Jogging, Aerobic  II. Technique of Start, Finishing  III. Technique of Track & Field Events		ishing
<u>PAINTING</u>	] ""	Part - II  Health and Activity Rec	
Unit - 3 :  A) The Bengal School  1) Introduction 2) Origin and Development  3) Main Features 4) Appreciation of the following Paintings:     (i) Journey's End (ii) Shiv and Sati     (iii) Radhika (iv) Meghdoot  5) Contribution of Indian artists in the struggle of National Freedom Movement.  6) National Flag of India and the Symbolic Significance of its forms and colours.	Fitness Components Health Components Skill Components	Fitness Parameters Body Composition Muscular Strength  Flexibility Endurance Balance Test Agility	Test Name BMI Partial Curl Up Modified Pushups Pushups Sit and Reach Test 600 Mt Run Flamingo Balance
B) The modern trends in Indian Art  1) Appreciation of the following Contemporary (Modern) Indian Art:  (i) Paintings (ii) Graphic - Prints (iii) Sculptures	-	Speed Power Coordination	Sprint/Dash Standing/Vertical Jump Plate Tapping Toss Test, Handball

# Syllabus of Class XII - Science Stream Session (2024-25) **NOVEMBER ENGLISH CHEMISTRY Revision Test Revision Test BIOLOGY Revision Test PHYSICS Revision Test**

<u>MATHEMATICS</u>	HINDUSTANI MUSIC VOCAL
Revision Test	Practical : (i) Tuning of Tanpura (ii) Practice of Alankars
PHYSICAL EDUCATION	PAINTING  Revision Test
Revision Test	
INFORMATION TECHNOLOGY  Project Work Revision Test	
FINANCIAL MAREKTS MANAGEMENT  Project Work  Revision Test	HEALTH AND PHYSICAL-EDUCATION [HPE]  NOV. TO DEC.  STRAND - III (Sewa)  Activity : I. Project I, II, III, IV  STRAND - IV Health Activity Card (For Record)

# **Syllabus of Class XII - Science Stream Session (2024-25) DECEMBER ENGLISH CHEMISTRY Preliminary Examination Preliminary Examination BIOLOGY Preliminary Examination PHYSICS Preliminary Examination**

MATHEMATICS	HINDUSTANI MUSIC VOCAL
Preliminary Exams	Preliminary Exams
	<u>PAINTING</u>
PHYSICAL EDUCATION	Preliminary Exams
Preliminary Test	
INFORMATION TECHNOLOGY	-
Preliminary Exams	
FINANCIAL MAREKTS MANAGEMENT	HEALTH AND PHYSICAL-EDUCATION [HPE]
Preliminary Exams	NOV. TO DEC.  STRAND - III (Sewa)  Activity : I. Project I, II, III, IV  STRAND - IV Health Activity Card (For Record)

## **Syllabus of Class XII - Science Stream Session (2024-25) JANUARY ENGLISH CHEMISTRY Pre-Board Exams Pre-Board Examination BIOLOGY Pre-Board Exams PHYSICS Pre-Board Exams Final Practical Examination**

<u>MATHEMATICS</u>	HINDUSTANI MUSIC VOCAL
Pre-Board Exams	Pre-Board Exams
	<u>PAINTING</u>
PHYSICAL EDUCATION	Pre-Board Exams
Pre-Board Exams Final Practical Exams.	Final Practical
INFORMATION TECHNOLOGY	
Pre-Board Exams Final Practical Exams.	
FINANCIAL MAREKTS MANAGEMENT	HEALTH AND PHYSICAL-EDUCATION [HPE]
Pre-Board Exams Final Practical Exams	

# **Syllabus of Class XII - Science Stream Session (2024-25) FEBRUARY ENGLISH CHEMISTRY Revision of Full Syllabus Final Practical Examination BIOLOGY Final Practical Examination PHYSICS Final CBSE Board Examination**

<u>MATHEMATICS</u>	HINDUSTANI MUSIC VOCAL
Final Practical, Revision of full syllabus	Revision of Full Syllabus
	Final Exams
	<u>PAINTING</u>
PHYSICAL EDUCATION	Final Exams
Revision of Syllabus	
INFORMATION TECHNOLOGY	
Revision of full Syllabus	
	HEALTH AND PHYSICAL-EDUCATION [HPE]
FINANCIAL MAREKTS MANAGEMENT	HEALTH AND I HISICAL-EDUCATION [HI E]
Revision of Full Syllabus	
Final Exams	

# Syllabus of Class XII - Science Stream Session (2024-25) **MARCH ENGLISH CHEMISTRY Final Board Examination Final Examination BIOLOGY Final CBSE Exams PHYSICS Final Board Exams**

MATHEMATICS	HINDUSTANI MUSIC VOCAL
Final Exams	Revision of Full Syllabus
	Final Exams
DIVISION DEVICE DE LA CONTRACTOR DE LA C	<u>PAINTING</u>
PHYSICAL EDUCATION	Final Exams
Final Practical	
INFORMATION TECHNOLOGY	
Final Exams	
FINANCIAL MAREKTS MANAGEMENT	HEALTH AND PHYSICAL-EDUCATION [HPE]
Final Exams	