

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
ENGLISH LANGUAGE

Prescribed Text Book : Total English (By Pamela Pinto and Xavier Pinto)

UNIT I		UNIT II	
CHAPTER NO.	TOPIC	CHAPTER NO.	TOPIC
Unit 1	A :Tenses and their use -I B: Composition- Introduction and Proposal Writing C : Preposition D. Specimen Paper I (Solved)	Unit 9	A : Two voices - One meaning B : Directed Writing - III C : Preposition D :Specimen Paper 9
Unit 2	A : Tenses and their use -II B : Organising and planning C : Preposition D :Specimen Paper 2	Unit 10	A :Comparison of Adjectives B : Descriptive Composition C : Preposition D : Specimen Paper 10
Unit 3	A : Tenses and their use -III B : The Opening and Closing C : Preposition D :Specimen Paper 3	Unit 11	A :Conditional Sentences B : Summary Writing C : Preposition D : Specimen Paper 11
Unit 4	A : Tenses and their use (IV) B : Narrative Composition C : Preposition D :Specimen Paper 4	Unit 12	A : Transformation of Sentences - I B : Comprehension Skills C : Preposition D : Specimen Paper 12
SYLLABUS FOR UNIT I		SYLLABUS FOR UNIT II	
Appropriate portions from the topics taught in Unit I shall be covered		Appropriate portions from the topics taught in Unit II shall be covered	
HALF YEARLY		ANNUAL	
CHAPTER NO	TOPIC	CHAPTER NO	TOPIC
Unit 5	A : Sequence of Tenses B : Telling a Story C : Preposition D :Specimen Paper 5	Unit 13	A : Transformation of Sentences - II B : Argumentative Composition C : Preposition D: Specimen Paper 13
Unit 6	A : Reported Speech - I B : Characterisation C : Preposition D :Specimen Paper 6	Unit 14	A: Transformation of Sentences - III B : Reflective Composition C : Preposition D: Specimen Paper 14

Unit 7	A : Reported Speech - II B : Directed Writing - I C : Preposition D :Specimen Paper 7	Unit 15	A : Transformation- Miscellaneous Exercises B : Free choice composition C :Preposition D: Specimen Paper 15
Unit 8	A : Agreement of the Verb with the Subject B : Directed Writing- II C : Preposition D :Specimen Paper 8	Unit 1 -15	Revision
SYLLABUS FOR HALF YEARLY		SYLLABUS FOR ANNUAL	
Composition , Comprehension, Report Writing (Dated, undated), Personal Profile Review (All types), Speech, Article, Proposal Writing, Grammar (Transformation of Sentences, Phrasal Verbs/ Prepositions, Tense) Listening Skill/ Speaking Skill		Composition , Comprehension, Report Writing (Dated, undated), Personal Profile Review (All types), Speech, Article, Proposal Writing, Grammar (Transformation of Sentences, Phrasal Verbs/ Prepositions, Tense) Listening Skill/ Speaking Skill	
PROJECT TOPICS : Description of a process/ Description of any Sports Events/ Review of any television show Project submission date : Ist draft :on or before 13 th August 2nd draft on or before 30 th November			

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
ENGLISH LITERATURE

UNIT I			UNIT II		
Prescribed Text Book	Chapter No	CONTENTS	Prescribed Text Book	Chapter No	CONTENTS
Echoes : A Collection of ISC Short Stories	5	The Story of an Hour- Kate Chopin	Echoes : A Collection of ISC Short Stories	10	B. Wordsworth – V.S. Naipaul,
				9	The Sound Machine- Roald Dahl
	7	A Gorilla in the Guest Room - GeraldDurrell	Reverie : A Collection of ISC Poems	10	We are the Music Makers – Arthur William Edgar O’Shaughnessy,
Reverie : A Collection of ISC Poems	1	The Darkling Thrush - Thomas Hardy		8	Dover Beach- Matthew Arnold
The Tempest		Act - IV	The Tempest		Act V and Epilogue
SYLLABUS FOR UNIT TEST 1			SYLLABUS FOR UNIT TEST II		

Appropriate portions from the topics taught in Unit I shall be covered			Appropriate portions from the topics taught in Unit II shall be covered		
HALF YEARLY			REHEARSAL		
Echoes : A Collection of ISC Short Stories	8	The Singing Lesson -Katherine Mansfield	Echoes : A Collection of ISC Short Stories		Revision
	4	To Build a Fire - Jack London			
Reverie : A Collection of ISC Poems	2	Birches - Robert Frost	Reverie : A Collection of ISC Poems		Revision
	5	Crossing the Bar- Alfred Lord Tennyson	The Tempest		Revision
The Tempest		Act 1 - Act V (till the portion taught)			
SYLLABUS FOR HALF YEARLY			SYLLABUS FOR REHEARSAL EXAMINATION		
Echoes : To Build a Fire, The Singing Lesson, The Story of an Hour, A Gorilla in the Guest Room Reverie : The Darkling Thrush, Birches, Crossing the Bar, The Gift of India The Tempest : Act I, II, III, IV			Entire ISC Syllabus		
PROJECT TOPICS	Analyse the character of Salvatore/ Mrs Mallard, Compare and contrast two main characters of the short story Fritz, Analyse the background of the poem John Brown Project submission date : Ist draft :on or before 13 th August Final :on or before 30 th November				

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
SECOND LANGUAGE (BENGALI)

UNIT I			UNIT II		
Prescribed Text Book	Chapter No	CONTENTS	Prescribed Text Book	Chapter No	CONTENTS
1.Probandho O Gadhya Sankolan	8	Lachmaner Maa	Probandho O Gadhya Sankolan	10	Na Paharar Parikha
Kabita Sankolan	8	Rasta Karo Ekar Noy	Kabita Sankolan	10	Nun
Koni		Ch. No. 12	Koni		Chapter No 14
Grammar		Misspelt Words Proverbs Join In One Word	Grammar		Misspelt Words Proverbs Join In One Word
SYLLABUS FOR UNIT TEST 1			SYLLABUS FOR UNIT TEST II		

Appropriate portions from the topics taught in Unit I shall be covered			Appropriate portions from the topics taught in Unit I shall be covered		
HALF YEARLY			REHEARSAL		
Probandho O Gadhya Sankolan	9	Ekti Tulshi Gacher Kahini	Probandho O Gadhya Sankolan		Whole book(10 stories to be studied Prescribed by I.S.C)
	7	Aadab	Kabita Sankolan		Whole book(10 poems to be studied Prescribed by I.S.C)
Kabita Sankolan			Koni		Whole book(14 chapters to be studied Prescribed by I.S.C)
	9	Swadhinata Tumi			
	7	Jodi Nirbashon Dao			
Koni		Ch. No. 13			
Grammar		Essay writing, Comprehension, Punctuation Mark, Synonyms, Homonyms, Proverbs	Grammar		Essay writing, Comprehension, Punctuation Mark, Synonyms, Homonyms, Proverbs
		Voice change,Narration, Misspelt words etc, Joint word, Transformation of sentences etc.			Voice change,Narration, Misspelt words etc, Joint word, Transformation of sentences etc.
SYLLABUS FOR HALF YEARLY			SYLLABUS FOR REHEARSAL		
Unit I and Half yearly all the chapters			Entire ISC Syllabus		
PROJECT TOPICS	Bidyalay Jiboner Smaronio Aviggota (Composition), Jora Sankor Dhare (Prose) by Abonindranath Tagore , Bornoporichoy (Poem) by Tarun Sanyal Project submission date : Ist draft :on or before 13 th August Final :on or before 30 th November				

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22 SECOND
LANGUAGE (HINDI)

UNIT I			UNIT II		
Prescribed Text Book	Chapter No	CONTENTS	Prescribed Text Book	Chapter No	CONTENTS
गद्य संकलन	1	अंधेरे का दीपक हरिवंश राय बच्चन	गद्य संकलन	1	एक फूल की चाह- सियारामशरण गुप्ता
	2	बाल लीला- सूरदास		2	बादल को धिरते देखा है -नागार्जुन

	3	उद्यमी नर- रामधारी -- रामधारी सिंह			
		including class XI syllabus			
	5	भक्तिन -महादेवी वर्मा		1	भक्तिन -महादेवी वर्मा
		संस्कृति क्या है -- दिनकर रामधारी सिंह दिनकर		2	आउटसाइडर- मालती जोशी
		क्या निराश हुआ जाए - हजारी प्रसाद द्विवेदी			
		आषाढ़ का एक दिन --1			आषाढ़ का एक दिन अंक -2
SYLLABUS FOR UNIT TEST I			SYLLABUS FOR UNIT TEST II		
Appropriate portions from the topics taught in Unit I shall be covered			Appropriate portions from the topics taught in Unit II shall be covered		
HALF YEARLY			REHEARSAL		
गद्य संकलन	3	एक फू ल की चाह- सियारामशरण गुप्ता	गद्य संकलन		Revision of the entire syllabus
	4	आ: धरती घकतना देती है - सुमित्रा नंदन पंत			
	5	भक्तिन -महादेवी वर्मा			
	6	संस्कृति क्या है -- रामधारी सिंह दिनकर			
	7	गौरी सुभद्रा कुमारी चौहान			
	8	पुत्र प्रेम -प्रेमचंद			
	9	शरणागत वृन्दावन लाल वर्मा			
	10	सती - शिवानी			
SYLLABUS FOR HALF YEARLY			SYLLABUS FOR REHEARSAL		
All chapters taught in Unit I and Half Yearly			The entire ISC Syllabus		
Project : As suggested by Council					
Project submission date : Ist draft :on or before 13 th August					
Final :on or before 30 th November					

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
PHYSICS

Prescribed Text Book : Nootan ISC Physics (By Kumar Mittal)

UNIT I			UNIT II		
SL NO.	TOPIC	CONTENTS	SL NO.	TOPIC	CONTENTS

1	Electrostatics	Coulomb's law, Electric field, Electric flux, Gauss's theorem	6	Electromagnetic Waves	Maxwell's Equation, displacement current Electromagnetic wave propagation, transverse nature, electromagnetic spectrum.
2	Current Electricity	Ohm's law and its proof, electrical energy and power,	7	Optics	Refraction at spherical surface, Lens maker's formula, equivalent focal length of lens combination, Refraction through prism, Dispersive power, Microscope, Astronomical telescope.
		colour code for carbon resistors, Kirchoff's laws,		Dual nature of radiation & matter Einstein's photoelectric equation, de-Broglie	Huygen's principle, Interference, Young's double slit experiment, Fraunhofer diffraction due to a single slit, Polarisation, Brewster's law., matter wave relation, Davisson-Germer experiment, X-Rays, Mosley's law.
		wheatstone bridge, metre bridge, Potentiometer.			
3	Magnetic effects of current and Magnetism	Biot-Savart law, Ampere's circuital law, Lorentz force, cyclotron, force on current in magnetic field, moving coil galvanometer, earth's magnetic field.			
SYLLABUS FOR UNIT TEST I			SYLLABUS FOR UNIT TEST II		
Appropriate portions from the topics taught in Unit I shall be covered			Appropriate portions from the topics taught in Unit II shall be covered		
HALF YEARLY			REHEARSAL		
1 Contd.	Capacitance and Capacitors	Parallel plate Capacitors, Capacitors in Series and in Parallel Combination	8	Atoms and Nuclei	Bohr's atomic model, Hydrogen spectrum, Radioactive Decay law, mass defect, binding energy per nucleon.
4	Electromagnetic induction and Alternating Currents	alternating current, reactance impedance, LC oscillations, LCR series circuit, resonance AC generator.	9	Electronic Devices	Semiconductor diodes, diode as a rectifier, Zener Diode as a voltage regulator, npn & pnp transistors, transistor as an amplifier, Logic Gates: OR, AND, NOT, NAND and NOR, combination of gates.

10	Communication Systems(block diagram)	Modes of propagation through sky and space, waves, satellite communication, Modulation, frequency and amplitude.			Revision of the entire ISC Syllabus
SYLLABUS FOR HALF YEARLY			SYLLABUS FOR REHEARSAL		
Theory from units: 1,2,3,4,10 + Practical + Project + File. Project submission date : Ist draft :on or before 13 th August Final :on or before 30 th November			Entire ISC syllabus + Practical + Project work		

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
CHEMISTRY

Prescribed Text Book : Nootan ISC Chemistry (By Dr. H. C. Srivastava)

Unit I			Unit II		
Serial No	Name of the Chapter	Topic	Serial No	Name of the Chapter	Topic
12	Aldehyde, Ketones & Carboxylic acids	General Classification, Manufacture, Preparation, Properties, Conversion, Distinction between Aldehydes & Ketones , Aliphatic & Aromatic Aldehydes	14	Polymers	Addition & Condensation Polymers, Polyesters Natural & Synthetic
8	Co-ordination Compounds.	Important terms of Co-ordination Compounds ,	4	Chemistry in Everyday Life	Medicinal chemistry, Antipyretics , Antiseptics , Preservatives, Soaps and Detergents
2		Isomerism , bonding -VBT &	14	Biomolecules.	

	Solutions	CFT & Limitations. Raoult's law, Colligative properties, Depression in Freezing point, Elevation in Boiling, Osmotic Pressure.			Carbohydrates, Proteins, Enzymes, Vitamins, Nucleic Acids
11	Alcohols Phenols & Ethers	Nomenclature, preparation, properties-, organometallic compounds.			
SYLLABUS FOR UNIT TEST 1			SYLLABUS FOR UNIT TEST II		
Appropriate portions from the topics taught in Unit I shall be covered			Appropriate portions from the topics taught in Unit II shall be covered		
HALF YEARLY			ANNUAL		
10	Haloalkanes and Haloarenes	Nomenclature, preparation, Properties- Chlorobenzene, Organometallic Compounds	6	p- block elements	Methods of Preparation, Group 16, 17, 18.
13	Organic Compounds containing Nitrogen	Nitro benzene, Amines, Aniline, (Methods of Preparation, Reaction, Distinguishing Tests between primary, secondary & tertiary Amines (Hinsberg's test).	7	General Principles and Processes of Isolation of Compound.	Ozone, Sulphur Dioxide, Sulphuric Acid, Hydrochloric Acid
1	Solid State.	Crystalline & Amorphous Lattice, Relation between Radius edge length, density, Interstitial Void, Imperfections in a Solid, Electrical & magnetic Properties.			Revision of the entire ISC Syllabus
3	Electrochemistry	Faraday's first & second law of Electrolysis, Galvanic Cells, Standard Hydrogen Electrode, of Graphical Representations, Order & Molecularity Reaction, Mechanism Arrhenius Equation & Catalyst			
11	d & f block elements.	Complex Formation, Magnetic Properties, lanthanide Contractions			

SYLLABUS FOR HALF YEARLY**SYLLABUS FOR REHEARSAL**

Entire ISC Syllabus

Practical: Salt Analysis (Identification of Anions & Cation –Double Salt),
Titrations (Iodometric Titrations), Identification of Organic Compounds (Formaldehyde, Acetaldehyde, Acetone, Glycerol)
PROJECT Explosive, Co-ordination Chemistry in Medicinal Field, Side Effects of Drugs, Narcotic Drugs Rocket Propellants, Medicinal Compounds
Project submission date : Ist draft :on or before 13th August
Final :on or before 30th November

Practical: Salt Analysis (Anions & Cations-Double Salt.)Titrations. Rate of the Reaction. To determine the pH of the Solutions given. Food Test. Electrochemical Cells.
Projects : Explosive, Co-ordination Chemistry in Medicinal Field, Side Effects of Drugs, Narcotic Drugs
Rocket Propellants, Medicinal Compounds

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
COMPUTER SCIENCE

**Prescribed Text Book : ISC Computer
Science with Java by Sumita Arora**

UNIT I			UNIT II		
CH. NO.	TOPICS	CONTENTS	CH. NO.	TOPICS	CONTENTS
1	Boolean Algebra	Propositional logic, Binary quantities, theorems, Karnaugh-maps, minterms, maxterms, SOP, POS .	12	Concept of Inheritance	Concept, Types of Inheritance, method overriding, base, derived class, superkeyword, Programs etc.
2	Computer Hardware	Logic Gates – AND, OR, NAND,NOR,XOR,XNOR Adders – half and full, Encoders, Decoders etc.	13	Simple Data Structures	Concept of linked list, types of linked list – singly, doubly linked list, Different types of queue.
3	Objects and Classes	Attributes, behaviour, Objects, Classes and their examples	14	Recursive Data Structures	Trees, terminologies, Types of Traversal Techniques -Inorder, Preorder, Postorder.
4	Java Revision Tour	Anatomy of java, fundamentals , Exceptionsetc.	15	Computational Complexity	Definition, Best, Worst, Average case complexity
5	Primitive values, Datatypes	Basic concepts, Token, Variable, different datatypes, their behaviour, casting, precedence of operators etc.			
6	Statements, Control Structures and Scope	if, if – then - else, switch, loops, different types, their syntax, use and differences etc.			
SYLLABUS FOR UNIT TEST I			SYLLABUS FOR UNIT TEST II		
Appropriate portions from the topics taught in Unit I shall be covered			Appropriate portions from the topics taught in Unit II shall be covered		

HALF YEARLY			REHEARSAL		
7	Functions/Methods	Functions, need, advantages, disadvantages, call by value, call by reference, Constructors, Formal/actual argument, Overloading, programs	1,2	Boolean Algebra, Computer Hardware	Revision
8	Arrays, Strings	1-D Arrays, 2-D Arrays, String concept, syntax and applications in computer programs etc.	3,4	Objects and classes, Java Revision Tour	Revision
9	Compiling and Running Java Programs	Writing , Compiling and executing Java Programs(In Blue Java) etc.	5	Primitive values, Wrapper classes, types and casting	Revision
10	Java Classes-An OOP Perspective	OOP Concept, characteristics of OOP, features of OOP, Classes, JVM etc.	6	Statements, Control Structures and Scope	Revision
11	Recursion	Difference with Iteration, Advantages, Disadvantages, Programs etc	7	Functions/Methods	Revision
			8	Arrays, Strings	Revision
			9	Compiling Java Programs	Revision
			10	Classes-An OOP Perspective	Revision
			11	Recursion	Revision
			12	Concept of Inheritance	Revision
			13	Simple Data Structures	Revision
			14	Recursive Data Structure	Revision
			15	Computational Complexity	Revision
SYLLABUS FOR HALF YEARLY			SYLLABUS FOR REHEARSAL		
Theory-Chapters 1,2,3,4,5,6,7,8,9,10,11 (From Text Book) Practical- (From Textbook, ISC Important Programs, ISC Resources Notes etc) Assignment File:- Total 15 Programs from Chapter 6(Loops), Chapter 7 (Class-Function based Programs), Chapter 8(1D arrays, 2D arrays, Strings)			Theory – All Chapters (As per ISC Syllabus) Practical- Assignment File:-Total 25 Programs from Chapter 6(Loops), Chapter 11(Recursion),Chapter 13(Data Structures) .		

Project submission date : Ist draft :on or before 13th August
Final :on or before 30th November

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
BIOLOGY
Prescribed Text Book :V. B. Rastogi

UNIT I			UNIT II		
CH NO.	TOPIC	CONTENTS	CH NO.	TOPIC	CONTENTS
1	Reproduction In Organisms	i) Reproduction ii) Modes of reproduction - asexual, sexual iii) Asexual reproduction - binary fission, budding, gemmule formation, clone iv) Vegetative propagation in plants v) Sexual reproduction vi) Events in sexual reproduction.	8	Human Health and Diseases	i) Pathogens ii) Parasites causing human diseases (common cold, dengue, chikungunya, typhoid, pneumonia, amoebiasis, malaria, filariasis, ascariasis, ring worm) and their control iii) Basic concepts of immunology - vaccines iv) Cancer, HIV and AIDS v) Adolescence - drug and alcohol abuse
2	Sexual reproduction in flowering plants	i) Flower structure ii) Development of male and female gametophytes iii) pollination - types, agencies and examples iv) Outbreeding devices v) pollen -pistil interaction vi) Double fertilisation vii) Post fertilisation events - development of endosperm and embryo, development of seed and formation of fruit viii) Special modes - apomixis, parthenocarpy, polyembryony ix) Significance of seed dispersal and fruit formation	9	Strategies for enhancement in food production	i) Improvement in food production : plant breeding, tissue culture, single cell protein, biofortification, apiculture and animal husbandry
3	Human Reproduction	i) Male and Female reproductive systems ii) Microscopic anatomy of testis and ovary iii) Gametogenesis - spermatogenesis and oogenesis iv) Menstrual cycle v) fertilisation, embryo development upto blastocyst formation, implantation vi) Pregnancy and placenta formation (elementary idea) vii) Parturition (elementary idea) viii) Lactation(elementary idea)	10	Microbes in Human Welfare	i) In household food processing ii) industrial production iii) sewage treatment iv) energy generation and microbes as biocontrol agents and biofertilisers v) Antibiotics vi) Production and judicious use
SYLLABUS UNIT TEST I			SYLLABUS UNIT TEST II		
Appropriate portions from the topics taught in Unit I shall be covered			Appropriate portions from the topics taught in Unit II shall be covered		

4	Reproductive Health	i) Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs) ii) Birth control -need and methods, contraception and medical and medical termination of pregnancy (MTP) iv) Amniocentesis v) Infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness)	11	Biotechnology - Principles and processes	Genetic Engineering (recombinant DNA technology)
5	Principles of Inheritance and Variation	i) Heredity and Variation : Mendelian Inheritance ii) Deviation from Mendelism - incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy iii) Elementary idea of polygenic inheritance iv) Chromosomal theory of inheritance v) Chromosomes and genes vi) Sex determination - in humans, fruit fly, birds and honey bee vii) Linkage and crossing over viii) Mutation ix) Sex linked inheritance - Haemophilia, Colour Blindness x) Mendelian disorders in humans . xi) Chromosomal disorders in humans	12	Biotechnology and its applications	i) Allocations of biotechnology in health and agriculture: human insulin and vaccine production, stem cell technology, gene therapy ii) Genetically Modified Organisms - Bt crops iii) Transgenic animals iv) Biosafety issues, biopiracy and biopatents
6	Molecular basis of Inheritance	i) Search for genetic material and DNA as genetic material ii) Structure of DNA and RNA iii) DNA packaging iv) DNA replication v) Central Dogma vi) Transcription, genetic code, translation vii) Gene Expression and Regulation - Lac operon iii) Human and Rice Genome projects iv) DNA fingerprinting	13	Organisms and Populations	i) Organisms and environment : habitat and niche, population and ecological adaptations ii) Population interactions - mutualism, competition, predation, parasitism iii) Population attributes - growth, birth rate and death rate, age distribution
7	Evolution	i) Origin of Life ii) Biological Evolution and evidences for biological evolution (palaeontology, comparative anatomy, embryology and molecular evidences) iii) Darwin's contribution, modern synthetic theory of evolution iv) Mechanism of evolution - variation and natural selection with examples, types of natural selection v) Gene flow and genetic drift vi) Hardy - Weinberg's principle vii) Adaptive radiation viii) Human evolution	14	Ecosystem	i) Ecosystems : patterns, components ii) Productivity and decomposition iii) Energy flow iv) Pyramids of number, biomass, energy v) Nutrient Cycles (carbon and phosphorus) vi) Ecological succession vii) Ecological Services - carbon fixation, pollination, seed dispersal, oxygen release (in brief)
			15	Biodiversity and its Conservation	i) Concept of biodiversity ii) patterns of biodiversity iii) Importance of biodiversity iv) Loss of biodiversity v) Biodiversity conservation vi) Hot spots, endangered organisms, extinction, Red Data Book, biosphere reserves, national parks, sanctuaries and Ramsar sites.

			16	Environmental Issues	i) Air pollution and its control ii) Water pollution and its control iii) Agrochemicals and their effects iv) Solid waste management v) Radioactive waste management vi) Green house effect and climate change vii) Ozone layer depletion viii) Deforestation ix) Any one case study story addressing environmental issue(s)
SYLLABUS FOR HALF YEARLY			SYLLABUS FOR REHEARSAL		
THEORY: Chapter no. 1,3,5,8,11 and 13 PRACTICAL : i) Flower dissection (any two families out of five) ii) Preparation of temporary slide			Theory : Chapter no. 1 to Chapter no. 16 PRACTICAL : As per ISC syllabus (taxonomy, biochemical and physiological expts., slide preparations, Spotting)		
iii) Spotting iv) Any physiological experiment photosynthesis , osmosis, plasmolysis, transpiration etc) PROJECT : Collection of assigned project Project submission date : Ist draft :on or before 13 th August Final :on or before 30 th November			PROJECT : Collection of assigned project for ISC		

**ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
MATHEMATICS**

Prescribed Text Book : M. L. Agarwal and Saha and Saha

UNIT I			UNIT II		
CHAPTER NO.	TOPIC	CONTENTS	CHAPTER NO	TOPIC	CONTENTS
2	Inverse trigonometric function	Inverse trigonometric function	8A	Indefinite Integration	By Substitution, Standard Methods, By Parts, Special Integrals
3	Matrices	Operations, Martin's Rule	10A	Probability (I)	Conditional probability, independent events.
4	Determinants	Properties	1(Section B)	Vectors	Scalar or dot product, Cross Product, Scalar Triple Product
1A	Relations	Properties and EquivalenceRelation	2A(Section B)	Straight Line in Space	Cartesian & Vector Equation in 3D,Coplanar & Skew Lines, Shortest Distance

1B	Functions	Real valued function and invertibility	2(Section C)	Regression Analysis	Line of best fit , angle between regression lines
1C	Binary Operations	Axioms and Properties	3 (Section C)	Linear programming	Linear programming (Graphically)
5A	Continuity	Continuity of functions	10B	Probability (II)	Baye's theorem, Mean, Variance of Random Variable
5B	Differentiability	Concept of differentiability	10C	Probability (III)	Binomial Distribution
SYLLABUS FOR UNIT TEST I			8 B	Definite Integration	Definition and application of properties
Appropriate portions from the topics taught in Unit I shall be covered			7A	Increasing and decreasing Function (Revision)	Increasing and decreasing Function
5C	Differentiation	Derivatives of functions	7B	Equation of Tangent and Normal (Revision)	Equation of Tangent and Normal
5D	Differentiation (Higher Derivative)	Successive differentiation	8A	Indefinite Integration (Revision)	By Substitution, Standard Methods, By Parts, Special Integrals
6	Indeterminate Form of Limits	L'Hospital's Rule	1 ((Section B)	Vectors (SEC-B) (Revision)	Scalar or dot product, Cross Product, Scalar Triple Product
7C	Rate Measurer	Rate Measurer	2 (Section C)	Regression Analysis (SEC - C) (Revision)	Line of best fit , angle between regression lines
7D	Approximation	Approximation	7 E	Maxima and Minima problems	Application of derivative and practical
7A	Increasing and decreasing Function	Increasing and decreasing Function	9	Differential Equations	Formation and solving differential
7B	Equation of Tangent and Normal	Equation of Tangent and Normal	3	Area under the curve	Application of definite integration
5E	Mean Value Theorem	Rolle's theorem and Lagrange's Mean value theorem	SYLLABUS FOR UNIT TEST II Appropriate portions from the topics taught in Unit II shall be covered		
SYLLABUS FOR HALF YEARLY			SYLLABUS FOR REHEARSAL		
Chapter 1- 16 Project : as specified on the Council Website Project submission date : Ist draft :on or before 13 th August Final :on or before 30 th November			SYLLABUS FOR THE PREBOARD INCLUDES THE ENTIRE ISC SYLLABUS PRESCRIBED BY COUNCIL		

ST FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2021-22
PHYSICAL EDUCATION

SECTION A

SECTION A		
1	Sociological Aspects of Physical Education	(i) Games and sports as man's cultural heritage. (ii) Development of the individual through games and sports. (iii) Role of Physical Education in promoting national integration. (iv) Physical Education and personality development.
2	Training Methods	(a) Meaning and importance of Sports Training.(b) Methods of training. (a) Warming up, conditioning and cooling/limbering exercises. (b) Isometric and Isotonic exercises (c) Circuit Training. (d) Weight Training
3	Career Aspects in Physical Education	(i) Career options in Physical Education. (ii) Important institutions of Physical Education in India.

4	Competitions and Tournaments	(i) Tournaments and types of tournaments. (ii) Difference between Professional and Amateur Players.
5	Health Education & Health Problems	(a) Meaning and definition of 'Health' and 'Health Education'. (b) Principles and importance of Health Education. Health problems and role of Health Education in solving them. (c) Disability and Rehabilitation (d) Posture. (e) Personal hygiene and sleep requirements. (f) Substance Abuse.
6	Sports Injuries and First Aid	(i) Sports related injuries. (ii) Role of a sportsperson in prevention of sports related accidents.. (iii) First Aid.
SECTION B		
	Any two of the following games are to be studied	Football, Hockey, Tennis, Basketball, Badminton, Athletics, Swimming, Volleyball, Cricket

ST FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XI
ACADEMIC SESSION 2021-22
SUPW

	TOPIC		TOPIC
Unit 1	Each One Teach One	Unit II	Fabric Painting
Half Yearly	Mask Making	Annual	Laundry Work
Project submission date : Ist draft :on or before 13 th August Final :on or before 30 th November			