ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2022 - 23
ENGLISH LANGUAGE
Total English (Morning Star)

UNIT I			UNIT II		
CH. NO.	NAME OF THE CHAPTER	TOPICS	CH. NO.	NAME OF THE CHAPTER	TOPICS
	Unit 1	A :Tenses and their use -I B: Composition- Introduction and Proposal Writing C : Preposition		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 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		
CH. NO.	NAME OF THE CHAPTER	TOPICS	CH. NO.	NAME OF THE CHAPTER	TOPICS
	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

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 REHEARSAL	
	Writing (Dated, undated), Personal Profile Review (All types), Speech, Article, Proposal Writing, Grammar (Transformation of Sentences, Phrasal		Entire ISC syllabus
PROJECT TOPICS :	Description of any Sports Events/ Review of any television show	PROJECT TOPICS :	Description of a process/Description of a scientific experiment/ How to operate a device/ Recipee of a dish

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

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2022 -23
ENGLISH LITERATURE
Prescribed Text Book : THE TEMPEST; ECHOES; REVERIE

UNIT I

CH. NO.	NAME OF THE CHAPTER	TOPICS
	Echoes	
5	The Story of an Hour- Kate Chopin	The Story of an Hour- Kate Chopin
7	A Gorrila in the Guest Room - Gerald Durrell	A Gorrila in the Guest Room - Gerald Durrell
1	The Darkling Thrush - Thomas Hardy	The Darkling Thrush - Thomas Hardy
	The Tempest Act -IV	**The Tempest Act -IV**

UNIT II

CH. NO.	NAME OF THE CHAPTER	TOPICS
	Echoes	
10	B. Wordsworth – V.S. Naipaul	B. Wordsworth – V.S. Naipaul
9	The Sound Machine- Roald Dahl	The Sound Machine- Roald Dahl
	Reverie	
10	We are the Music Makers – Arthur William Edgar O'Shaughnessy	We are the Music Makers – Arthur William Edgar O'Shaughnessy
8	Dover Beach - Matthew Arnold	
	The Tempest	
	The Tempest Act -IV	The Tempest Act -IV

SYLLABUS FOR UNIT TEST I

Appropriate portions from the topics taught in Unit I shall be covered

Echoes : The Story of an Hour , A Gorilla in the Guest Room
Reverie : The Darkling Thrush, Desiderata
The Tempest : Act IV (till the portion taught)

SYLLABUS FOR UNIT TEST II

ɔpriate portions from the topics taught in Unit II shall be cc

Echoes : B. Wordsworth,The Sound Machine, Gorilla and the Guest Room
Reverie : We are the Music Makers, Dover Beach, John Brown
The Tempest : Act V and Epilogue

HALF YEARLY

CH. NO.	NAME OF THE CHAPTER	TOPICS
	Echoes	
	The Singing Lesson - Katherine Mansfield	The Singing Lesson -Katherine Mansfield
	To Build a Fire - Jack London	To Build a Fire - Jack London

REHEARSAL

CH. NO.	NAME OF THE CHAPTER	TOPICS
	Echoes : Revision	**Echoes** : Revision
	Reverie : Revision	**Reverie** : Revision
	Ther Tempest : Revision	**Ther Tempest** : Revision

Reverie

Birches - Robert Frost

Crossing the Bar- Alfred Lo

Birches - Robert Frost

Crossing the Bar- Alfred Lord Tennyson

The Tempest

Act 1 - Act V (till the porti

Act 1 - Act V (till the portion taught)

SYLLABUS FOR HALF YEARLY		SYLLABUS FOR REHEARSAL	
	Echoes : To Build a Fire, The Singing Lesson, The Story of an Hour, A Gorrila 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 Topic :	The theme analysis of The Darkling Thrush	Project Topic :	The theme analysis of Crossing the Bar
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 2022-23
PHYSICS
Prescribed Text Book : ISC PHYSICS by Pritambar

UNIT I			UNIT II		
CH. NO.	NAME OF THE CHAPTER	TOPICS	CH. NO.	NAME OF THE CHAPTER	TOPICS
1	Electric Charges and Fields	Electric charges; conservation and quantisation of charge, Coulomb's law; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, Gauss's theorem in Electrostatics and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell.	8	Ray Optics and Optical Instruments	Ray Optics: Reflection of light by spherical mirrors, mirror formula, refraction of light at plane surfaces, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lens maker's formula, magnification, power of a lens, combination of thin lenses in contact, combination of a lens and a mirror, refraction and dispersion of light through a prism. Scattering of light. Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers and their resolving powers.
2	Electrostatic Potential, Potential Energy and Capacitance	Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostaticfield. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarisation, capacitors and capacitance, combination of capacitors in series and in parallel. Capacitance of a parallel plate capacitor, energy stored in a capacitor	9	Dual Nature of Radiation andMatter	Wave particle duality; photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation - particle nature of light. Matter waves - wave nature of particles, de-Broglie relation; conclusion from Davisson-Germer experiment. X-rays.

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		
CH. NO.	NAME OF THE CHAPTER	TOPICS	CH. NO.	NAME OF THE CHAPTER	TOPICS

3	Current Electricity	Mechanism of flow of current in conductors. Mobility, drift velocity and its relation with electric current; Ohm's law and its proof, resistance and resistivity and their relation to drift velocity of electrons; V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity. Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance and resistivity. Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's laws and simple applications, Wheatstone bridge, metre bridge. Potentiometer - principle and its applications to measure potential difference, to compare emf of two cells; to measure internal resistance of a cell	10	Wave Optics	Wave front and Huygen's principle. Proof of laws of reflection and refraction using Huygen's principle. Interference, Young's double slit experiment and expression for fringe width(β), coherent sources and sustained interference of light, Fraunhofer diffraction due to a single slit, width of central maximum; polarisation, plane polarised light, Brewster's law, uses of plane polarised light and Polaroids.
4	ing charges and magn	Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application. Ampere's Circuital law and its applications to infinitely long straight wire, straight and toroidal solenoids (only qualitative treatment). Force on a moving charge in uniform magnetic and electric fields, cyclotron. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field; moving coil galvanometer - its sensitivity. Conversion of galvanometer into an ammeter and a voltmeter	11	Atoms	Alpha-particle scattering experiment; Rutherford's atomic model; Bohr’s atomic model, energy levels, hydrogen spectrum. Rutherford’s nuclear model of ato
5	Magnetism and Matter	A current loop as a magnetic dipole, its magnetic dipole moment, magnetic dipole moment of a revolving electron, magnetic 184 field intensity due to a magnetic dipole (bar magnet) on the axial line and equatorial line, torque on a magnetic dipole (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; earth's magnetic field and magnetic elements. Diamagnetic, paramagnetic, and ferromagnetic substances, with examples. Electromagnets and factors affecting their strengths, permanentmagnets.	12	Nuclei	Composition and size of nucleus, Radioactivity, alpha, beta and gamma particles/rays and their properties; radioactive decay law. Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; Nuclear reactions, nuclear fission and nuclearfusion.

6	ectromagnetic Inducti	Faraday's laws, induced emf and current; Lenz's Law, eddy currents. Self-ind	13	Electronic Device	(i) Semiconductor Electronics: Materials, Devices and SimpleCircuits. Energy bands in conductors, semiconductors and insulators (qualitative ideas only). Intrinsic and extrinsic semiconductors. (ii) Semiconductor diode: I-V characteristics in forward and reverse bias, diode as a rectifier; Special types of junction diodes: LED, photodiode, solar cell and Zener diode and its characteristics, zener diode as a voltage regulator. (iii)Junction transistor, npn and pnp transistor, transistor action, characteristics of a transistor and transistor as an amplifier (common emitter configuration). (iv) Elementary
7	Alternating Current	Peak value, mean value and RMS value of alternating current/voltage; their relation in sinusoidal case; reactance and impedance; LC oscillations (qualitative treatment only), LCR series circuit, resonance; power in AC circuits, wattless current. AC generator.			

SYLLABUS FOR HALF YEARLY	SYLLABUS FOR REHEARSAL
For half yearly examination all the chapters from 1-7	for Rehearsal examination, all the chapters from 1- 13

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 2022-23
CHEMISTRY
Prescribed Text Book : ISC CHEMISTRY by Dr Sawhney(Balaji Publications)

UNIT I			UNIT II		
CH. NO.	NAME OF THE CHAPTER	TOPICS	CH. NO.	NAME OF THE CHAPTER	TOPICS
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,Bio-degradable polymer
8	**Co-ordination Compounds.**	Important terms of Co-ordination Compounds , Nomenclature of co-ordination compounds, Isomerism , bonding -VBT & CFT & Limitations.	4	**Chemistry in Everyday Life**	Medicinal chemistry,Antipyretics ,Antiseptics , Preservatives, Soaps and Detergents
1	**Solutions**	Raoults law , Colligative properties, Depression in Freezing point, Elevation in Boiling, Osmotic Pressure.		**Surface Chemistry**	Adsorption, Fruendlich Isotherm, Protective Colloid gold number, Chemisorption & Physiosorption
11	**Alcohol & Phenols & Ethers**	Nomenclature, preparation, properties-, organometallic compounds.	14	**Biomolecules.**	Carbohydrates, Proteins, Enzymes, Vitamins, Nucleic Acids

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		
CH. NO.	NAME OF THE CHAPTER	TOPICS	CH. NO.	NAME OF THE CHAPTER	TOPICS
10	**Haloalkanes and Haloarenes**	Nomenclature, preparation, Properties- Chlorobenzene, Organometallic Compounds	7	**p- block elements.**	Methods of Preparation, Group 16, 17 ,18.
13	**Organic Compounds c**	Nitro benzene ,Amines, Aniline , (Methods of Preparation , Reaction , Distinguishing Tests between primary , secondary & tertiary Amines (Hinsberg ‘s test).	6	**General Principles a**	Ozone, Sulphur Dioxide, Sulphuric Acid, Hydrochloric Acid compounds.
1	**Solid State.**	Crystalline & Amorphous Lattice, Relation			

		between Radius edge length, density, Interstitial Void, Imperfections in a Solid, Electrical & magnetic Properties.
3	**Electrochemistry**	Faraday's first & second law of Electrolysis, Galvanic Cellls, Standard Hydrogen Electrode , Electrode Potential, Electrochemical Series, Nernst Equation , Kohlrausch's Law, corrosion
3	**Chemical Kinetics**	Rate of Reaction , Law of Mass Action, Concept Of reversible Reactions Equilibrium Constant in terms of Graphical Representations,Order & Molecularity Reaction, Mechanism Arrhenius Equation & Catalyst.
10	**d& f block elements.**	d-Block: 3d, 4d & 5d series. f-Block : 4f & 5f series.

SYLLABUS FOR HALF YEARLY

Syllabus for the Half –Yearly including the Project Work.

Practical: Salt Analysis (Identification of Anions & Cation –Double Salt)

Titrations (Iodometric Titrations)

Identification of Acetone, Glycerol)

Project Topic will Be given at the beginning of the Session

SYLLABUS FOR REHEARSAL

Syllabus for the Annual Examinations including the Project Work.

Practical: Salt Analysis (Anions & Cations-Double Salt.)

1. Titrations.
2. Rate of the Reaction.
3. To determine the pH of the Solutions given.
4. Food Test.
5. Electrochemical Cells.

Project Topic will Be given at the beginning of the Session.

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 2022-23
MATHEMATICS
Prescribed Text Book : UNDERSTANDING ISC MATHEMATICS BY M.L. AGGARWAL

UNIT I

CH. NO.	NAME OF THE CHAPTER	TOPICS
	SECTION A	
1	Inverse trigonometric function	Inverse trigonometric function
2	Matrices	Operations, Martin's Rule
3	Determinants	Properties
4	Relations	Properties and Equivalence Relation
5	Functions	Real valued function and invertibility
6	Binary Operations	Axioms and Properties
7	Continuity	Continuity of functions
8	Differentiability	Concept of differentiability

UNIT II

CH. NO.	NAME OF THE CHAPTER	TOPICS
	SECTION A	
19	Probability (II)	Mean, Variance of Random Variable
20	Probability (III)	Binomial Distribution
	Increasing and decreasing Function (Revision)	Increasing and decreasing Function
	Equation of Tangent and Normal (Revision)	Equation of Tangent and Normal
	Definite integration,Indefinite Integration (Revision)	properties and its application,by Substitution,Standard
	Vectors **(SEC-B)** (Revision)	Scalar or dot product, Cross Product, Scalar
	Regression Analysis **(SEC - C)** (Revision)	Line of best fit , angle between regression lines

SYLLABUS FOR UNIT TEST I

Appropriate portions from the topics taught in Unit I shall be covered

SYLLABUS FOR UNIT TEST II

Appropriate portions from the topics taught in Unit II shall be covered

HALF YEARLY

CH. NO.	NAME OF THE CHAPTER	TOPICS
	SECTION A	
9	Differentiation	Derivatives of functions
10	Differentiation (Higher Derivative)	Successive differentiation
11	Indeterminate Form of Limits	L'Hospital's Rule
12	Rate Measurer	Rate Measurer
13	Approximation	Approximation

REHEARSAL

CH. NO.	NAME OF THE CHAPTER	TOPICS
	SECTION A	
21	Maxima and Minima	Application of
22	Differential Equations	Formation and solving differential equation by
	SECTION B	
3	Area under the curve	Application of definite

14	Increasing and decreasing Function	Increasing and decreasing Function
15	Equation of Tangent	Equation of Tangent and Normal
16	Mean Value Theorem	Rolle's theorem and Lagrange's Mean value theorem
17	Indefinite Integration	By Substitution,Standard Methods, By Parts,Special Integrals
18	Probability (I)	Conditional probability,independent events.
	SECTION B	
1	Vectors	Scalar or dot product, Cross Product, Scalar Triple Product
2	Straight Line in Space	Cartesian & Vector Equation in 3D, Coplanar & Skew Lines, Shortest Distance
	SECTION C	
1	Regression Analysis	Line of best fit , angle between regression lines
2	Linear programming	Linear programming (Graphically)
4	The Plane	Cartesian & Vector Equation, Angle between two planes,
	SECTION C	
3	Application of derivative in Commerce and Economics	Cost and revenue function. Profit function, break even

SYLLABUS FOR HALF YEARLY

Project submission date : Ist draft :on or before 26th August
Final :on or before 30th November

SYLLABUS FOR REHEARSAL

INCLUDES THE ENTIRE ISC SYLLABUS
PRESCRIBED BY COUNCIL. PROJECT OF 20 MARKS TO BE INCLUDED
INCLUDED AS PER NEW ISC SYLLABUS

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XII SCIENCE
ACADEMIC SESSION 2022-23
BIOLOGY
Prescribed Text Book : ISC BIOLOGY by Dr. S C Tripathy, Balaji Publication

UNIT I			UNIT II		
CH. NO.	NAME OF THE CHAPTER	TOPICS	CH. NO.	NAME OF THE CHAPTER	TOPICS
1	Reproduction in Organisms	Reproduction, a characteristic feature of all organisms for continuation of species; modes of reproduction - asexual and sexual reproduction; asexual reproduction - binary fission, sporulation, budding, gemmule formation, fragmentation; vegetative propagation in plants	9	Molecular basis of Inheritance	Search for genetic material and DNA as genetic material; structure of DNA and RNA; DNA packaging; DNA replication; central dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; human and rice genome projects; DNA fingerprinting
2	Sexual reproduction in flowering plants	Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; outbreeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes - apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.			

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

CH. NO.	NAME OF THE CHAPTER	TOPICS
3	Human Reproduction	Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementaryidea).
4	Reproductive Health	Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).
5	Principles of inheritance and variation	Heredity and variation: Mendelian inheritance; deviations from Mendelism - incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosomal theory of inheritance; chromosomes and genes; sex determination - in humans, fruit fly, birds and honey bee; linkage and crossing over; mutation; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders
10	Evolution	Origin of life; biological evolution and evidences for biological evolution (palaeontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; gene flow and genetic drift; Hardy - Weinberg's principle; adaptive radiation; human evolution.
11	Strategies for enhancement in food production	Improvement in food production: green revolution, plant breeding, tissue culture, single cell protein, biofortification, apiculture and animalhusbandry.
12	Microbes in Human Welfare	In household food processing, industrial production, sewage treatment, energy generation and microbes as biocontrol agents and biofertilisers. Antibiotics.

6	Human Health and Diseases	Pathogens; parasites causing human diseases (common cold, dengue, chikungunya, typhoid, pneumonia, amoebiasis, malaria, filariasis, ascariasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.	13	Biotechnology and its applications	Applications of biotechnology in health and agriculture: human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and biopatents.
7	Biotechnology - Principles and processes	Genetic Engineering (recombinant DNA technology)	14	Ecosystem	Ecosystems: patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy; nutrient cycles (carbon and phosphorous); ecological succession; ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief)
8	Organisms and Populations	Organisms and environment: habitat and niche, population and ecological adaptations; population interactions - 236 mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution.	15	Biodiversity and its Conservation	Concept of biodiversity; patterns of biodiversity; importance of biodiversity; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves, national parks, sanctuaries and Ramsarsites
			16	Environmental Issue	Air pollution and its control; water pollution and its control; agrochemicals and their effects; solid waste management; radioactive waste management; greenhouse effect and climate change; ozone layer depletion; deforestation; any one case study as success story addressing environmental issue(s).

SYLLABUS FOR HALF YEARLY	SYLLABUS FOR REHEARSAL
All the chapters from 1-8 shall be there for Half-yearly	All the chapters from 1-16 shall be there for the rehearsal

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 2022-23
COMPUTER SCIENCE
Prescribed Text Book : ISC Computer Science with Java by Sumita Arora

UNIT I		
CH. NO.	NAME OF THE CHAPTER	TOPICS
1	Boolean Algebra	Propositional logic, Binary quantities, theorems, Karnaugh-maps, minterms, maxterms,SOP,POS .
2	Computer Hardware	Logic Gates – AND, OR, NAND,NOR,XOR,XNOR Adders – half and full, Encoders, Decoders etc.
3	Objects and Classes	Attributes, behaviour, Objects, Classes and their examples
4	Java Revision Tour	Anatomy of java,fundamentals , Exceptions etc.
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.

UNIT II		
CH. NO.	NAME OF THE CHAPTER	TOPICS
12	Concept of Inheritance	Concept,Types of Inheritance, method overriding, base, derived class, super
13	Simple Data Structures	Concept of linked list, types of linked list – singly, doubly linked list, Different
14	Recursive Data Structures	Trees, terminologies, Types of Traversal Techniques -Inorder, Preorder,
15	Computational	Definition, Best, Worst, Average case

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		
CH. NO.	NAME OF THE CHAPTER	TOPICS
7	Functions /Methods	Functions, need, advantages, disadvantages, call by value, call by reference, Constructors, Formal/actual argument, Overloading, programs etc
8	Arrays, Strings	1-D Arrays, 2-D Arrays, String concept, syntax and applications in computer programs etc.
9	Compiling and Running Java Programs	Writing , Compiling and executing Java Programs (In Blue Java) etc
10	Classes-An OOP Perspective	OOP Concept, characteristics of OOP,features of OOP, Classes, JVM etc.
11	Recursion	Difference with Iteration, Merits, Demerits,Programs

REHEARSAL		
CH. NO.	NAME OF THE CHAPTER	TOPICS
1,2	Boolean Algebra,Computer Hardware	Revision
3,4	Objects and classes,Java Revision Tour	Revision
5	Primitive values, Wrapper classes,	Revision
6	Statements, Control Structures and Scope	Revision
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), Chapter7 (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 Chapter6(Loops), Chapter7 (Class-Function based Programs),Chapter8(1D arrays, 2D a Chapter 11(Recursion),Chapter 13(Data Structures) .

Project submission date : 1st 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
BENGALI
Prescribed Text Book : Probandho O Gadhya Sankolan, Kabita Sankolan ,Koni

UNIT I

CH. NO.	NAME OF THE CHAPTER	TOPICS
8	Lachmaner ma	Lachmaner ma
8	Rasta karur aker noi	Rasta karur aker noi
12	Koni	Koni
	Grammer	misspelt word..… proverbs join in one word etc.

Project Topics -
1. Chattro jibon o swamajseba(COMPOSITION)
2 Taser ghar.. (Prose) by..Tarasankar Bondopadhyay
3 Swadhinata Tumi(Poem) by.. Samsur Rahman
Date of submission….28th July,2022

UNIT II

CH. NO.	NAME OF THE CHAPTER	TOPICS
10	Na paharer parikkha	Na paharer parikkha
10	Nun	Nun
14	Koni	Koni
	Grammer	misspelt word..… proverbs join in one word etc.

SYLLABUS FOR UNIT TEST I

Appropriate portions from the topics taught in Unit I shall be covered

SYLLABUS FOR UNIT TEST II

ppriate portions from the topics taught in Unit II shall be co

HALF YEARLY

CH. NO.	NAME OF THE CHAPTER	TOPICS
9	Ekti tulsi gacher kahini	Ekti tulsi gacher kahini
7	Aadab	Aadab
9	Swadhinata Tumi	Swadhinata Tumi
7	Jodi nirbasan dao	Jodi nirbasan dao
13	Koni+unit..1 syllabus	Koni+unit..1 syllabus
	Grammar & Composition	Essay writing, comprehension, punctuation marks Synonyms,homonyms,proverbs voice change, narration change etc.

REHEARSAL

CH. NO.	NAME OF THE CHAPTER	TOPICS
PROSE….Whole book..10 storiesto be studied		
POETRY ..Whole book..10 poemsto be		
KONI……Whole book ..14 chapterr to be		
	Transformation of sentences,punctuation	

SYLLABUS FOR HALF YEARLY

Unit I + as mentioned above

SYLLABUS FOR REHEARSAL

Whole book