

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XI 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 :Simple, Compound and Complex Sentences B: Directed Writing - I and Proposal Writing C : Phrasal Verbs D. Specimen Paper I (Solved) | Unit 9 | A : Conditional Sentences (2) B : Characterisation C : Phrasal Verbs D :Specimen Paper 9 |
| Unit 2 | A : Transformation of Sentences (I) B : Creative Writing C : Phrasal Verbs D :Specimen Paper 2 | Unit 10 | A :Direct and Indirect Speech B : Narrative Composition C : Homophones D : Specimen Paper 10 |
| Unit 3 | A : Agreement of Subject and verb B : Atmosphere in Creative Writing C : Phrasal Verbs D :Specimen Paper 3 | Unit 11 | A :Transformation of Sentences (2) B : Argumentative Composition C : : Homophones D : Specimen Paper 11 |
| Unit 4 | A : Tenses and their use (I) B : Composition - Organisation C : Phrasal Verbs D :Specimen Paper 4 | Unit 12 | A : Use of Adjectives B : Descriptive Composition C : Correct Use of Words 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 :Tenses and their use (2) B : Short Stories C : Phrasal Verbs D :Specimen Paper 5 | Unit 13 | A : Use of since and for B : Comprehension skills C : Correct use of words D: Specimen Paper 13 |
| Unit 6 | A : Active and Passive Voice B : Directed Writing - II | Unit 14 | A: Use of Multiple prepositions (I) B : Summary Writing |

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| | C : Phrasal Verbs D :Specimen Paper 6 | | C : Correct use of words D: Specimen Paper 14 |
| Unit 7 | A : Sequence of Tenses B : Description of characters C : Phrasal Verbs D :Specimen Paper 7 | Unit 15 | A : Use of Multiple prepositions (2) B : Elements to omit in a summary D: Specimen Paper 15 |
| Unit 8 | A : Conditional Sentences (I) B : Directed Writing 3 C : Phrasal Verbs 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 any Sports Events 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 XI 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 | 1 | Salvatore : W. Somerset Maugham, | Echoes : A Collection of ISC Short Stories | 7 | Gorilla in the Guest Room - Gerald Durrel |
| | 2 | Fritz : Satyajit Ray | | | |
| Reverie : A Collection of ISC Poems | 4 | The Gift of India - Sarojini Naidu | Reverie : A Collection of ISC Poems | 7 | Desiderata - Max Ehrmann |

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|--|--|--|--|---|--------------------------------------|
| The Tempest | | Act - I (Sc1, 2 till the portion taught) | The Tempest | | Act 2 (full) , Act 3 (Sc 1) |
| 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 | | | ANNUAL | | |
| Echoes : A Collection of ISC Short Stories | 3 | Quality : John Galsworthy | Echoes : A Collection of ISC Short Stories | 6 | The Chinese Statue - Jeffrey Archer |
| | 6 | John Brown - Bob Dylan | | | |
| Reverie : A Collection of ISC Poems | | Dolphins : Carol Anne Duffy | Reverie : A Collection of ISC Poems | 9 | The Spider and the Fly - Mary Howitt |
| The Tempest | | Act 1 (Sc 1, 2), Act 2 (sc 1) | The Tempest | | Act - 3 (Sc 2, 3) |
| SYLLABUS FOR HALF YEARLY | | | SYLLABUS FOR ANNUAL | | |
| Echoes: Salvatore, Fritz, Quality Reverie :The Gift of India, Dolphins, John Brown The Tempest : Act 1 (full) and Act 2 (till the portion taught) | | | Echoes : Salvatore, Fritz, Quality, Gorilla in the Guest Room, The Chinese Statue. Reverie :The Gift of India, Dolphins, John Brown, Desiderata, The Spider and the Fly The Tempest : Act 1, 2, 3 (full) | | |
| PROJECT TOPICS | Analyse the plot of the play - The Tempest / Analyse any character of the play -The Tempest / Summary of any poem from the syllabus 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 XI SCIENCE
ACADEMIC SESSION 2021-22
HINDI

| UNIT I | | | UNIT II | | |
|-----------------------------|-------------------|------------------------------------|-----------------------------|-------------------|------------------------|
| Prescribed Text Book | Chapter No | CONTENTS | Prescribed Text Book | Chapter No | CONTENTS |
| गद्य संकलन | 1 | पुत्र प्रेमप्रेमचंद्र - प्रेमचंद्र | गद्य संकलन | 5 | आउट साइडर - अमरकांत |
| | 2 | गौरी - सुभद्रा कुमारी चौहान | | 6 | दासी जयशंकर प्रसाद |
| काव्य मंजरी | 1 | बाल लीला - सूरदास | | | आषाढ का एक दिन (19-27) |

| | | | | | |
|--|-------------------|--|--|-------------------|--------------------------------------|
| | 2 | एक फूल की चाह - सियारामशरण गुप्त | | | व्याकरण |
| | | व्याकरण | | | अशुद्ध वाक्यों को शुद्ध करें |
| | | अशुद्ध वाक्यों को शुद्ध करना | | | आगरे का वाक्य में प्रयोग |
| | | मुहावरों का वाक्य में प्रयोग | | | अपठित गद्यांश |
| | | अपठित गद्यांश, निबंध लेखन | | | निबंध लेखन |
| SYLLABUS FOR UNIT TEST 1 | | | SYLLABUS FOR UNIT TEST II | | |
| पुत्र प्रेमप्रेमचंद्र – प्रेमचंद्र, गौरी - सुभद्रा कुमारी चौहान बाल लीला – सूरदास , एक फूल की चाह - सियारामशरण गुप्त व्याकरण-अशुद्ध वाक्यों को शुद्ध करना मुहावरों का वाक्य में प्रयोग | | | आउट साइडर -अमरकांत, दासी- जयशंकर प्रसाद , आषाढ़ का एक दिन (19-27) व्याकरण अशुद्ध वाक्यों को शुद्ध करें, आगरे का वाक्य में प्रयोग | | |
| HALF YEARLY | | | ANNUAL | | |
| Prescribed Text Book | Chapter No | CONTENTS | Prescribed Text Book | Chapter No | CONTENTS |
| | 1 | शरणागत | | 1 | क्या निराश हुआ जाए |
| | 2 | सती | | 2 | गौरी |
| | 5 | नदी के द्वीप | | 3 | शरणागत |
| | 6 | तुलसीदास के पद | | 4 | सती |
| | 7 | जाग तुझको दूर जाना | काव्य मंजरी | 9 | बादल को घिरते देखा है - नागार्जुन |
| | | आषाढ़ का एक दिन (9-18 तक) | | 6 | तुलसीदास के पद - तुलसीदास |
| | | व्याकरण | | 3 | एक फूल की चाह - सियाराम शरण गुप्त |
| | | अशुद्ध वाक्य को शुद्ध करना, मुहावरों का वाक्य में प्रयोग | | 4 | जाग तुझको दूर जाना - महादेवी वर्मा |
| | | अपठित गद्यांश, निबंध लेखन | | | आषाढ़ का एक दिन (1-27) |
| SYLLABUS FOR HALF YEARLY | | | SYLLABUS FOR ANNUAL | | |
| पुत्र प्रेमप्रेमचंद्र – प्रेमचंद्र, गौरी - सुभद्रा कुमारी चौहान बाल लीला – सूरदास , एक फूल की चाह - सियारामशरण गुप्त व्याकरण-अशुद्ध वाक्यों को शुद्ध करना मुहावरों का वाक्य में प्रयोग, अपठित गद्यांश, निबंध लेखन | | | क्या निराश हुआ जाए, गौरी आउट साइडर - अमरकांत, दासी- जयशंकर प्रसाद , आषाढ़ का एक दिन (19-27), बादल को घिरते देखा है , जाग तुझको दूर जाना , व्याकरण अशुद्ध वाक्यों को शुद्ध करें, मुहावरों का वाक्य में प्रयोग , अपठित गद्यांश, निबंध लेखन | | |
| Project : Bharatiya Narike Badalte Rup | | | Project : Samajsewa Sacchi Manav seva | | |
| Project submission date : Ist draft :on or before 13 th August | | | Project submission date : Final :on or before 30 th November | | |

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XI SCIENCE
ACADEMIC SESSION 2021-22
BENGALI

| UNIT I | | | UNIT II | | |
|---------------------------------|--|--|----------------------------------|---|--|
| Prescribed Text Book | Chapter No | CONTENTS | Prescribed Text Book | Chapter No | CONTENTS |
| Probandho O Gadhya Sankolan | 1 2 | Thakurda Jorasankor dhare | Probandho O Gadhya Sankolan | 5 6 | Record BirjoSulka |
| Kabita Sankolan | 1 2 | Ora kaj kore Pub paschim | Kabita Sankolan | 5 6 | Salamaner Maa Baborer Prarthona |
| Koni | | Chapter no 1,2,&3 | Koni | | Chapter No 7,8 ,9 |
| Grammar | | Misspelt words Proverbs Join in one word | Grammar | | Misspelt words Proverbs Join in one word |
| SYLLABUS FOR UNIT TEST 1 | 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 | | | ANNUAL | | |
| Probandho O Gadhya Sankolan | 3 4 | Taser Ghar Anachar | Probandho O Gadhya Sankolan | 7. 8. | Aadab Lachmaner Maa |
| Kabita Sankolan | 3 4 | Bonolata Sen Barnoparichoy | Kabita Sankolan | 7. | Jodi Nirbasan Dao |
| Koni | | Chapter No 4,5 ,6 | Koni | | Ch. No. 10 & 11 & Unit II Syllabus |
| Grammar | | Essay writing Comprehension Transformation of sentences etc. Punctuation Mark | Grammar | | Essay writing Comprehension Transformation of sentences etc. Punctuation Mark Synonyms, Homonyms Proverbs |

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|---|--|--|---|
| | Synonyms, Homonyms Proverbs Voice change Narration change Misspelt words etc. Joint word | | Voice change Narration change Misspelt words etc. Joint word |
| SYLLABUS FOR HALF YEARLY | | SYLLABUS FOR ANNUAL | |
| All Chapters taught in Unit 1 and appropriate portions from Half Yearly | | All the chapters taught in Unit 1 , Half Yearly , Unit II and Annual | |
| Project topics : Jol, Bayu o Sobdodushon Ebong Tar Protikar (Composition) Thakurda (Prose) by Ranindranath Tagore, Pub paschim (Poem) by Achinta Kumar Sengupta 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 XI SCIENCE
ACADEMIC SESSION 2021-22
BIOLOGY
Prescribed Text Book :V. B. Rastogi

| UNIT I | | | UNIT II | | |
|-------------------|---|--|-------------------|-----------------------------|---|
| Chapter No | Name of the chapters | CONTENTS | Chapter No | Name of the chapters | CONTENTS |
| | I. DIVERSITY OF LIVING ORGANISMS | i) What is living ? ii) Need for classification iii) Three domains of life iv)Taxonomy and Systematics v) Concept of species and taxonomical hierarchy vi) Binomial | 12 | Transport in Plants | i) Movement of water, gases and nutrients ii) Cell to cell transport iii) Diffusion iv) Active transport v) Plant- water relations vi) Imbibition vii) Water potential viii) Osmosis ix) Plasmolysis x) Long Distance Transport of Water |

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|------------------------|--|--|-------------------------|---|--|
| | | Nomenclature vii) Tools for study of taxonomy-museums | | | – absorption, apoplast, symplast, transpiration pull, root pressure and guttation |
| 1 | The Living World | viii) Zoological parks, herbaria, botanical gardens(refer to reference book as well), Key | | | xi) Transpiration xii) Opening and Closing of Stomata |
| 2 | Biological Classification | i) Five kingdom classification ii) Salient features and classification of Monera, Protista, Fungi, Plantae and Animalia, Lichens, Viruses and Virioids . | | | xiii) Uptake and Translocation of mineral nutrients – transport of food – phloem transport xiv) Mass flow hypothesis xv) Diffusion of Gases |
| 3 | Plant Kingdom | a) Algae b) Bryophyta c) Pteridophyta d) Gymnosperms e) Angiosperms f) Comparison of life cycle patterns of different plant groups | 13 | Mineral Nutrition | i) Essential Minerals ii) Macro and Micro nutrients and their roles iii) Deficiency Symptoms iv) Mineral Toxicity v) Elementary Idea Of Hydroponics vi) Nitrogen Metabolism vii) Nitrogen Cycle viii) Biological Nitrogen Fixation(refer to reference book as well) |
| 4 | Animal kingdom | i) Animal construction-body plan (cell aggregate plan, blind sac plan and tube-within-tube plan) ii) Symmetry (spherical, radial, and bilateral symmetry) , Coelom development (diploblastic and triploblastic organization in animals, acoelomate, pseudocoelomate, coelomate and haemocoelomate), Segmentation | 14 | Photosynthesis In Higher Plants | i) Photosynthesis as a mean of autotrophic nutrition ii) Site of Photosynthesis iii) Pigments involved in Photosynthesis (elementary idea) iv) Photochemical and Biosynthetic phases of Photosynthesis v) Cyclic and Non Cyclic Photophosphorylation vi) Chemiosmotic Hypothesis vii) Photorespiration viii) C ₃ and C ₄ Pathways ix) Factors affecting Photosynthesis |
| UNIT 1 SYLLABUS | Appropriate portions from the topics taught in Unit I shall be covered | | UNIT II SYLLABUS | Appropriate portions from the topics taught in Unit II shall be covered | |

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| 5 | II. STRUCTURAL ORGANISATION IN ANIMALS AND PLANTS | a) Morphology and modifications of root, stem, leaf | 15 | Respiration In Plants | i) Exchange of Gases ii) Cellular Respiration – Glycolysis iii) Fermentation (anaerobic) iv)TCA Cycle and Electron Transport System v) Energy Relations- Number of ATP molecules generated vi) Amphibolic Pathway vii) Respiratory Quotient |
| 6 | Morphology of flowering plants | b) Morphology of flower, fruit and seed. Structure of a typical flower, types of inflorescence (racemose and cymose) | 16 | Plant Growth And Development | i) Seed Germination ii) Phases of Growth iii) Conditions of Growth iv) Differentiation v) Dedifferentiation and Redifferentiation vi) Sequence of developmental processes in a plant vii) Growth Regulators- Auxin , Gibberellin, Cytokinin , Ethylene, ABA viii) Seed Dormancy ix) Vernalisation x) Photoperiodism(refer to reference book as well) |
| 7 | Anatomy Of Flowering Plants | a) Plant Tissues : type of plant tissues, Meristematic and Permanent, structure and function of simple tissues (Parenchyma, Collenchyma and Sclerenchyma) and Complex tissues (Xylem and Phloem), Tissue system. Internal structure of root, stem and leaf | 17 | V. HUMAN PHYSIOLOGY Digestion and absorption | i) Alimentary Canal And Digestive Glands ii) Role of Digestive Enzymes iii) Peristalsis iv) Digestion, Absorption and Assimilation of – Proteins, Carbohydrates and Fats v) Egestion vi) Nutritional and Digestive Disorders |
| | | b) Secondary Growth in dicot stem and dicot root | 18 | Breathing and Exchange of Gases | i) Respiratory organs in animals (recall only) ii) Respiratory System in Humans iii) Mechanism of breathing and its regulation - exchange of gases, transport of gases and regulation of respiration iv) Respiratory Volumes v) Disorders related to respiration |

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| 8 | Structural Organisation In Animals | a) Animal Tissues b) Cockroach (refer to reference book as well) | 19 | Body Fluids and Circulation | i) Composition of blood ii) Blood Groups iii) Coagulation of Blood iv) Composition of Lymph and Its Function v) Human Circulatory System-b structure of heart and blood vessels vi) Cardiac Cycle vii) Cardiac Output viii) ECG ix) Double Circulation x) Regulation of Cardiac Activity xi) Disorders of Circulatory System |
| | | | 20 | Excretory Products And Their Elimination | i) Modes of Excretion – ammonotelism, Ureotelism, Uricotelism ii) Human Excretory System – Structure and Function iii) Urine Formation iv) Osmoregulation v) Regulation of Kidney Function vi) Renin – angiotensin, atrial natriuretic factor vii) ADH and Diabetes insipidus viii) Role of erythropoietin ix) Role of other organs in excretion x) Disorders of excretory system- Uremia, Renal failure, Renal calculi, Nephritis, Dialysis and artificial kidney(refer to reference book as well) |
| | | | 21 | Locomotion and Movement | i) Types of Movement – ciliary, flagellar and muscular ii) Skeletal Muscles – contractile proteins and muscle contraction iii) Skeletal System and its functions iv) Joints v) Disorders of muscular and skeletal system |
| 9 | III. CELL : STUCTURE AND FUNCTION | Cell – The Unit Of Life | 22 | Neural Control And Coordination | i) Neuron and Nerves ii) Nervous System in Humans - - Central Nervous System iii) Peripheral Nervous System and Visceral Nervous System iv) Generation and Conduction of Nerve Impulse |

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| | | i) Cell Theory and Cell as the basic unit of life ii) Structure of Prokaryotic and Eukaryotic cells iii) Plant cell and Animal cell iv) Cell envelope, Cell membrane, Cell wall v) Cell Organelles | | | v) Reflex Action vi) Sensory Perception vii) Sense Organs viii) Elementary Structure and Functions of Eye and Ear (refer to reference book as well) |
| | | | 23 | Chemical Coordination and Integration | i) Endocrine Glands and Hormones ii) Human Endocrine System – all the glands iii) Mechanism of hormone action (elementary idea) iv) Role of hormones as messengers and regulators v) Hypo – Hyperactivity and Related Disorders |
| | | | | | |
| 10 | | Biomolecules | i) Proteins ii) Carbohydrates iii) Lipids iv) Nucleic Acids v) Enzymes | | |
| 11 | | Cell Cycle and Cell Division | i) Cell Cycle ii) Mitosis iii) Meiosis and their significance | | |
| HALF YEARLY SYLLABUS | Chapter 1 to 10 PRACTICAL : i) Any two experiments from physiology, morphology or cytology and Spotting PROJECT : Project as assigned to individual students. Application of Biotechnology, AIDS, Global Warming and its consequences, IVF and other topics as per ISC Scope (Submission : Before Half Yearly Examination) Project submission date : Ist draft :on or before 13 th August Final :on or before 30 th November | | | | THEORY: Chapter no. 1 to Chapter no. 22 PRACTICAL : i) Any two from physiology, morphology or cytology <u>ii) Spotting</u> PROJECT : Collection of assigned project |

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

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

| UNIT I | | | UNIT II | | |
|--|------------------------|---|---|------------------------------|---|
| C H. NO. | NAME OF THE CHAPTER | TOPICS | C H. NO. | NAME OF THE CHAPTER | TOPICS |
| 1 | Data Representation | Number Systems, Conversions, Binary Arithmetic (Addition, Subtraction, Multiplication) etc. | 9 | Exception Handling | Program Error Types, Exception Errors, Exception handling, Exception Hierarchy etc.. |
| 3 | General OOP Concepts | Evolution of software, OOP Concepts etc. | 10 | Using Library Classes | Using Library classes, Packages Wrapper classes, Working with Strings, Packages etc.. |
| 4 | Introducing Java | Creating & running java program (Using Blue Java) ,related commands etc. | 12 | Operations on Files | Text Files, Binary Files |
| 7 | Classes in Java | Composite type, encapsulation, JVM, Bytecode etc. | 13 | Trends in Computing & Ethics | Trends in Computing & Ethical Hacking, Piracy, Computer crime, Email and its use, |
| 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 | | | ANNUAL | | |
|---|--------------------------------|--|--|----------------------------|--|
| CH. NO. | NAME OF THE CHAPTER | TOPICS | CH. NO. | NAME OF THE CHAPTER | TOPICS |
| 2 | Propositional Logic & Hardware | Propositional Logic, Laws of Boolean Algebra, Logic Gates, Adders etc. | 1 | Revision | Propositional Logic, Laws of Boolean Algebra, Logic Gates, Adders etc. |
| 5 | Java Fundamentals | Character set, tokens, data types, variables, their types, uses operators etc. | 2 | Revision | Character set, tokens, data types, variables, their types, uses operators etc. |
| 6 | Flow of Control | for loop, while loop, do-while loop, nested loop, input output examples etc. | 5 | Revision | for loop, while loop, do-while loop, nested loop, input output examples etc. |
| 11 | Arrays | Types of Arrays - 1D, 2D, Sorting-Bubble, | 8 | Revision | Call by value, Call by Reference, constructor overloading, recursion etc. |
| 8 | Functions / Methods | Call by value, Call by Reference, constructor overloading, recursion etc. | | | |
| SYLLABUS FOR HALF YEARLY EXAMINATION INCLUDING PROJECT WORK | | | SYLLABUS FOR ANNUAL EXAMINATION | | |

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| <p>Theory – Chapters 1,2,3,4,5,6,7,8,11(From Text Book) Practical-Assignment File:- Total 10 Programs from Chapter 1(String Encoding, Conversion from another), Chapter 6(Loops), Chapter 8 (Programs using functions) Submission-File to be submitted on or before 25th of August, 2020 Project on vehicle routing, movie ticket reservation, Arduino simulation etc.</p> | <p>Theory – Chapters All Practical- (From Textbook, ISC Important Programs, ISC Resources Notes) Assignment File:- Total 20 Programs from Chapter 1(String Encoding, Conversion from one Number System to another), Chapter 6(Loops), chapter 8 (Programs using functions, recursion), Chapter 12(Files) Chapter 11(1 dimensional arrays, 2 dimensional arrays or matrices, Strings), Submission-File to be submitted by 4th December, 2021</p> |
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**ST. FRANCIS XAVIER SCHOOL
 SYLLABUS FOR CLASS XI SCIENCE
 ACADEMIC SESSION 2021-22
 CHEMISTRY**

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

| Unit I | | | Unit II | | |
|-------------|---------------------------|--|-------------|-------------------------|--|
| CHAPTER NO. | NAME OF THE CHAPTER | TOPIC | CHAPTER NO. | NAME OF THE CHAPTER | TOPIC |
| 2 | Structure of Atom. | Concept of Atom, Rutherford's theory, Bohr's theory , Hund's Rule , Aufbau Principle | 8 | Redox Reactions. | Concept of oxidation & Reduction , Oxidation No., Oxidation & Reduction in terms of |

| | | | | | |
|----|--|---|----|--------------------------|--|
| 3 | Classification of Elements and | Introduction, Catenation, Classification | 9 | Hydrogen | Methods of Preparation, Bosch Process , Chemical Properties, Structure. |
| 12 | Organic Chemistry :Some basic Principles & Technique. | Substitution ,addition elimination, Heterolytic | 10 | Chemical Kinetics | of the reaction. Hydrolysis constant, Buffers, Ph (Numericals) |
| 4 | Chemical Bonding | Electrovalent Bond, Covalent ,Co-ordinate Bond, ,Hydrogen Bonding, VSEPR, MO theory. | | | |

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| SYLLABUS FOR UNIT TEST 1 | Appropriate portions from the topics taught in Unit I shall be covered | | SYLLABUS FOR UNIT II | Appropriate portions from the topics taught in Unit II shall be covered | |
| HALF YEARLY | | | ANNUAL | | |
| CHAPTER NO. | NAME OF THE CHAPTER | TOPIC | CHAPTER NO. | NAME OF THE CHAPTER | TOPIC |
| 6 | Chemical Thermodynamics. | Meaning of work, energy, Mathematical form of Reversible & Irreversible work, First law of | 14 | Environmental Chemistry | Energy, Pollution-Air ,Water ,Soil & Green Chemistry |
| 5 | States of Matter: | Gas Laws, Kinetic Theory, Ideal gas Equation , Derivation of Van Der Waals Equation. | | | |

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| 13 | Hydrocarbons | General formula , Methods of Preparation , Chemical Properties & Physical properties. | 11 | Some p-Block elements | Group 13, Borax-Bead Test, Boric Acid, Diborane, Group 14 - Silicon Carbides Silicon Tetrachloride |
| 9. | Study of Representative | S block- chemical reactivity, properties & | | | |
| 1. | Some Basic Concepts of Chemistry. | Dalton's atomic theory, law of Chemical combinations, atomic 3.& Isotopic masses, | | | |
| 10 | s-Block elements | Group I and II , Castner -Keller cell , | | | |
| SYLLABUS FOR HALF YEARLY EXAMINATION Chapters 5,13 9, 1& also the previous topics. Practical :Salt Analysis. (Anion & Cation –Single | | | SYLLABUS FOR ANNUAL EXAMINATION Theory – Chapters All | | |

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| Salt) (Group I,II & III).(SO₄²⁻· NO₃⁻,CO₃²⁻) Project: Explosives , Atomic Structure, Chemical Bonding , DNA Fingerprinting, Rocket Propellants, Medicinal Drugs and its Side Effects. | Practical: Salt Analysis. (Anion & Cation –Single Salt) (Group I,II cations),III, IV Titrations : KMnO ₄ Vs Oxalic Acid. |
| 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 XI
ACADEMIC SESSION 2021-22
MATHEMATICS

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

| UNIT 1 | | | UNIT II | | |
|--------|------------------------|-------------------------------|---------|--|--|
| SL NO. | TOPIC | CONTENTS | SL NO. | TOPIC | CONTENTS |
| 1 | Set | Set theory and its Operations | 1 | Trigonometry (Properties of Triangles) | Sine, Cosine formula, Area of a triangle |
| 2 | Logarithm | Properties of Logarithm | 2 | Permutation and Combination | Concept of Factorial, Permutation & Combination, Restricted & Circular Permutation |
| 3 | Angles and arc lengths | Angles and arc lengths | 3 | Relations and Functions | Cartesian product, domain, range, classification of functions |
| 4 | Trigonometric | Trigonometric function | 4 | Linear Inequation | Graphical solution of inequations and quadratic inequations |

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|---------------------------------|--|---|----------------------------------|---|---|
| | function | | | | |
| 5 | Compound and multiple angles | Compound and multiple angles addition and product rule | 5 | Circle | Equations of Circles and their Tangents |
| 6 | Trigonometric Equations | Solving Trigonometric equations | | | |
| 7 | Complex Number | Real & imaginary number, Modulus and argument, Argand Plane(Locus),Cube root of Unity | | | |
| 8 | Quadratic equations | Quadratic(equation, function, inequalities) | | | |
| SYLLABUS FOR UNIT TEST 1 | 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 | | | ANNUAL | | |
| 9 | Mathematical Induction | Proving Series & Divisibility by Mathematical Induction | | Binomial Theorem | General term, Middle term and problems |
| 10 | Finite and Infinite Sequence | A.P., G.P., A.G.P. Series | | Limits and Derivatives | Limits of algebraic, trigonometric, exponential and logarithmic functions, derivatives of functions using 1 st and 2 nd principle, Sum, Difference, Product and Quotient Rule for derivatives |
| 11 | Co-Ordinate Geometry | Points and Co-ordinates, Locus, Equation of a Straight Line | | Probability | Random experiments and their outcomes, Addition theorem |
| 12 | Statistics | Mean, Median, Mean Deviation from Mean and Median, Mode, Standard Deviation | | Mathematical Reasoning (Sec B) | Mathematical reasoning |
| 13 | Conics (Sec B) | Equations of Parabola, Ellipse, Hyperbola and their Tangents | | Three Dimensional Geometry (Sec B) | Points in 3D, Distance, Section and Mid point formula |

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|--------------------------------|--------------------------------------|--|--------------------|--|---|
| 14 | Statistics (Sec C) | Combined Mean, Quartile, Decile, Percentile | | Index number & Moving Average (Sec C) | Index number, Moving Average (Graphically) |
| 15 | Correlation (Sec C) | Karl Pearson's & Spearman's Method of Correlation | | | |
| HALF YEARLY SYLLABU S | All chapters of UT 1 and Half yearly | | ANNUAL SYLLABUS | All the chapters of UT 1, Half yearly, UT II | |

**ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XI
ACADEMIC SESSION 2021-22
PHYSICS**

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

| UNIT I | | | HALF YEARLY | | |
|--------|--------------------------------|---|-------------|-------------------------------|---|
| CH No. | Name of the Chapter | Topic | CH No. | Name of the Chapter | Topic |
| 1 | Physical World and Measurement | Scope of physics and its application in everyday life. Nature of physical laws. | 4 | Work, Power and Energy | Work done by constant force and a variable force; kinetic energy, work-energy |
| | | Units and measurement. | | | theorem, power. |
| | | Accuracy of measurement, errors. | | | Potential energy, conservative and non conservative forces. |
| | | Significant figures. | | | Concept of collision. |
| | | Dimensional analysis. | | | |
| 2 | Kinematics | Motion in a straight line. | 5 | Motion of System of Particles | Centre of mass. |

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|--|----------------------------|--|---|----------------------------------|--|
| | | Vector analysis | | and Rigid body | Moment of Inertia. |
| | | Projectile motion. | 6 | Gravitation | Kepler's laws of planetary motion, universal |
| 3 | Laws of Motion | Newton's laws of motion | | | law of gravitation. Acceleration due to gravity (g) |
| | | Friction | | | and its variation with altitude, latitude and depth. |
| | | Uniform circular motion | | | Gravitational potential and gravitational |
| | | | | | potential energy, escape velocity, orbital |
| | | | | | velocity of a satellite, Geo-stationary satellites. |
| | | | | | Revision from the reference book |
| SYLLABUS FOR UNIT 1 | | | SYLLABUS FOR HALF YEARLY | | |
| Appropriate portions from the topics taught in Unit I shall be covered | | | Theory from serial Number 1 to 6 +Practical + Project work. | | |
| UNIT II | | | ANNUAL | | |
| CH NO | Name of the Chapter | Topic | CH No. | Name of the Chapter | Topic |
| | | | 7 Contd. | Properties of Bulk matter | Fluid dynamics, Eqn. of Continuity, Bernoulli's principle |
| 7 | Properties of Bulk Matter | Elasticity in solids | 8 | Heat and Thermodynamics | Thermal Properties of Matter. |
| | | Pressure in liquids. | | | Heat transfer- conduction, convection |
| | | Viscosity in liquids. | | | and radiation. |
| | | Surface energy and surface tension in liquids. | | | Thermal equilibrium and zeroth law |
| | | | | | of thermodynamics. |
| 9 | Behaviour of perfect gas | Kinetic theory of gases- assumptions, concept of | | | First law of thermodynamics, isothermal |

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| | Kinetic Theory of gases | pressure, kinetic interpretation of temperature, | | | and adiabatic processes. |
| | | degrees of freedom, law of equipartition of Energy | | | Second law of thermodynamics; reversible |
| | | | | | and irreversible processes, Heat engine |
| | | | | | and refrigerator. |
| | | | 10 | Oscillations and waves | Simple Harmonic Motion. |
| | | | | | Free, forced and damped Oscillations. |
| | | | | | Transverse and longitudinal waves. |
| | | | | | Wave speed. |
| | | | | | Superposition of waves. |
| | | | | | Strings. |
| | | | | | Doppler Effect of sound. |
| | | | | | Revision from the reference book |
| SYLLABUS FOR UNIT II | | | SYLLABUS FOR ANNUAL | | |
| Appropriate portions from the topics taught in Unit II shall be covered | | | Theory from serial Number 1 to 10 +Practical + Project work. | | |

ST. FRANCIS XAVIER SCHOOL
SYLLABUS FOR CLASS XI
ACADEMIC SESSION 2021-22
PHYSICAL EDUCATION

SECTION - A

| | | |
|---|---|---|
| 1 | Concept of Physical Education | (i) Meaning of Physical Education, its aim and objectives. (ii) Misconceptions about Physical Education and the relevance of Physical Education (iii) Meaning of 'Play' and Recreation'. (iv) Meaning and concept of 'Games and Sports'. |
| 2 | Individual Aspects and Group Dynamics | (a) Interest and attitude. (b) Motivation. (b) Leadership. |
| 3 | Effects of Physical Exercise on Human Body Systems | <i>(i) The skeletal and muscular system: (ii) Respiratory System (iii) Circulatory system (iv) Digestive System (v) Effect of exercise and benefits of regular training on the above systems.</i> |
| 4 | Nutrition, Weight Control & Exercise | (i) Nutrition Basics (ii) Balanced Diet and role of balanced diet in performance. (iii) Obesity and weight control; Life time concept of weight control. |
| 5 | Physical Fitness & Wellness | (i) Physique, Physical Fitness and Wellness (ii) Components of physical fitness and wellness (iii) Factors affecting physical fitness and wellness. (iv) Tests and Measurements in Sports. |

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| 6 | Games and Sports – a global perspective | (i) Olympics as a Social force. (ii) History of Modern Olympics. (iii) Asian Games. |
| 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 |