

# SACRED HEART SCHOOL

## Monthly Syllabus – Session – 2024-25

Class: XII

Subject: Biology

Book: NCERT

Month	Chapters/Topics	Learning Outcomes
April	Ch-1 sexual reproduction in flowering plants- Flower parts, pollination & Fertilization Ch. - 2 Human Reproduction - Male & Female reproductive system, Placenta & MC	Enhance their knowledge related to topic
May	Ch. 3 Reproductive Health - STD's, MTP & IVF	Role of contraceptive devices and IVF
June	Ch- 4 principles of inheritance and variation - Mendal inheritance & incomplete dominance PT--1 Revision	Enhance there knowledge related genetic disorder
July	Ch -4 – Continue Ch- 5 Molecular basis of inheritance - structure of DNA and RNA	Enhance their knowledge related HGP and DNA finger printing
August	Ch-6 Evolution - origin of life and Hardy - Weinberg's principle Ch. - 7 Human health and disease - Malaria, HIV	Enhance their knowledge related zeen flow and genetic drift, AIDS
September	Ch- 8 Microbes in human welfare - microbes roll in industry and sewage treatment PT-2 Revision	Enhance there knowledge related microbes role in different field
October	Ch- 9 Biotechnology - principle and processes – genetic engineering and Recombinant DNA technology	Enhance their knowledge related to GE and Recombinant DNA technology
November	Ch. -10 Biotechnology and its applications - human insulin and BT crops Ch. -11 Organisms and populations	enhance the knowledge r to related topics
December	Ch. – 12 Ecosystem - ecosystem and energy flow Ch. - 13 biodiversity and its conservation- biodiversity ,Red Data Book & Sanctuaries	enhance the knowledge to related topic
January	Revision – Annual Exam.	Enhance their knowledge related for competency based question

February	Revision – Sample Practice (Annual Exam.)	Technique for solve Assertion Reason Question
March	Annual Exam.	

## EVALUATION

Exams	Chapters/Topics of Theory Exam	Internal Assessment
PT-1	Ch. – 1 , 2 & 3	Enhance knowledge best on activity and practical questions
PT-2	Ch – 1 To 7	Enhance communication skills
PT –3	Ch. – 8 to 10	Enhance well writing & communication skills
Annual	Ch. – 1 to 13	, enhance the ability to completing the answers on the time

# SACRED HEART SCHOOL

## Monthly Syllabus – Session – 2024-25

Class: XII

Subject: Chemistry

Book: Ncert

Month	Chapters/Topics	Learning Outcomes
April	Chapter 1 solution Concentration of solution Solubility of solid and gases in liquid Vapor pressure and collective property of solution Normal and abnormal molar mass	To understand the strength of various kinds of solutions
May	Ch-2 electrochemistry Electrochemical cell Electrode potential and cell potential Nerst equation faraday's law of electrolysis Cells and batteries	Applications of sales and batteries in daily life
June	Ch-3 chemical kinetics Rate of reaction Rate of appearance and disappearance Molecularity and order of reaction Integrated rate expression of first and zero order reaction Effect of temperature concentration and catalyst	Speed of reactions
July	Ch- 4 haloalkanes and haloarenes Classification and nomenclature of halolkans and Haloarenes Methods of preparation of haloalkanes and haloarenes Physical and chemical properties of haloalkanes and haloarenes Stereo chemistry in haloalkanes	Applications of organic compounds and you life
August	Ch-5 alcohol phenols and ethers Preparation of alcohols and phenols Chemical properties and physical properties of alcohols and phenols Preparation of ether Physical and chemical properties of ether Revision.	Practical and industrial application of alcohols and phenols
September	Term 2 examinations	

October	<p>Ch-6 aldehyde ketones and carboxylic acids  Nomenclature and classification of aldehydes and ketones  Preparation of aldehydes and ketones  Physical and chemical properties of aldehydes and ketones  Preparation of carboxylic acid  Physical and chemical properties of carboxylic acid</p>	Various sweetening and flavoring agents used in daily life
November	<p>Ch-7 organic compounds containing nitrogen  Preparation of amines and diazonium salt  Physical and chemical properties of diazonium salts and amines  Ch-8 Biomolecules    Carbohydrates , proteins , nucleic acids, vitamins</p>	Various organic compounds used to make dyes
December	<p>Ch-9 d and f block elements  Transition and inner transition metals  Physical properties of transition metals  Chemical properties of transition metals  Lanthanides and actinides contraction  Ch- 10 coordination compounds    Some important terms related to coordination compounds  IUPAC nomenclature of coordination compound  Valence bond theory  Crystal field theory  . Revision</p>	Reactions of metals that we use in our daily life
January	Pre board	
February		
March		

## EVALUATION

Exams	Chapters/Topics of Theory Exam	Internal Assessment
PT-1	Solution	
PT-2	Electrochemistry and chemical kinetics	
Term-1	Solutions electrochemistry chemical kinetics haloalkanes and Haloarenes alcohols phenols and ethers	
Term-2	Solutions lectrochemistry Chemical kinetics Haloalkanes and haloarenes Alcohols phenols and ethers Aldehydes, ketones and carboxylic acids Organic compounds containing nitrogen d and f block elements coordination compounds	

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# SACRED HEART SCHOOL

## Monthly Syllabus – Session – 2024-25

Class: \_\_XII\_\_ Subject: \_Physics\_\_\_\_\_

Book: \_NCERT,Dineshpublication,

Month	Chapters/Topics	Learning Outcomes
April	Chapter-01—Electric charge and Field	Electric charge, conductor and insulator, Basic properties of electric charge, Coulomb's law, Forces between multiple charges, Electric Field, Electric field lines, Electric flux, Electric dipole, Dipole in external field, continuous charge distribution, Gauss law and its applications.
May	Chapter--02 Electrostatics Potential and Capacitance	Electrostatics potential, Potential due to a point charge, Potential due to an electric dipole, potential due to a system of charges, Equipotential surface, Potential energy of a system of charges, Potential energy in an external Field, Electrostatics of a conductors, Dielectric and polarisation, Capacitor and Capacitance, The parallel plate Capacitor, Effect of Dielectric on Capacitance, combination of Capacitors, Energy Stored in a Capacitor.
June	Chapter-03 Current Electricity  Chapter-04, Magnetic Effect of Electric current	Electric current, Electric current in conductors, Ohm's law, Drift of electrons and origin of resistivity, Electric Energy, Power, Cells, E.M.F., Internal Resistance, Cells in series and in parallel, Kirchhoff's laws, Wheatstone Bridge. Magnetic Force, Motion in Magnetic field, motion due to a current element, Bio-Savart's law, Magnetic field on the Axis of a circular current loop. AMPERE Circuital Law, the solenoid, Force between two parallel current, Torque on current loop, Magnetic dipole, The moving coil galvanometer,
July	Chapter-05 Magnetism and Matter  Chapter-06 Electro Magnetic Induction	The bar Magnet, Magnetism and Gauss's law, magnetisation and Magnetic intensity, Magnetic properties of materials, Experiments of Faraday and Henry, Magnetic flux, Faraday's law of Induction, Lenz's law and conservation of energy, motional Electromotive Force, inductance A.C. generator
August	Chapter-'07 Alternating current Chapter--08	A.C. Voltage Applied to a resistor, Representation of A.C. current and voltage by rotating vectors-- Phasors A.C. voltage applied to an inductor, A.C. voltage applied to Capacitor, A.C. voltage applied to a series L. C. R. CIRCUIT, The power factor, transformers. Displacement current, electromagnetic waves, Electromagnetic spectrum.
September	Chapter--09 Ray optics and Optical Instruments Chapter--10	Reflection of light by a spherical mirrors, Refraction, Total Internal Reflection, Refraction at spherical surfaces and by lenses, Refraction through a prism, optical instrument, # Hudgens Principle, Refraction and Reflection of

	Wave Optics	plane waves using Hygiene Principle, Current and Incoherent Addition of waves, Inference of light waves and Young's Experiment, Diffraction, polarization,
October	Chapter--11 Dual Nature of matter and radiation Chapter--12 Atoms	Electron emission, Photoelectric Fffect,Experimental Study of Photoelectric effect,Photoelectric Effect and Wave theory of light, Einstein's Photoelectric Electric Effect equation:Energy Quantum of Radiation, Particle Nature of Light, ;The Photon,,Wave Nature of matter,
November	Chapter--13 Nuclei	Introduction Atomic Mass and Composition of Nucleus, Size of Nucleus, Mass Energy and Nuclear Binding Energy, Nuclear Force, Radioactivity, Nuclear Energy,
December	Chapter--14 Semiconductor Electronics:Materials, Devices And Simple Circuits	Introduction , Classification of Metals,Conductor and Semiconductors,Intrinsic Semiconductor, Extrinsic Semiconductor, p-n Junction,
January		
February		
March		



## EVALUATION

Exams	Chapters/Topics of Theory Exam	Internal Assessment
PT-1	Chapter-1,2,3.	completion of fair copy, Regularity and Punctuality, Neatness, Behavior with teachers and students, Taking part in school activities. Practical performances.
PT-2	Chapter-,2,3,4,5,	Same as above
P.T-3	Chapter-1,2,3,4,5,6,7,8,	Same as above
Term-2	All above Chapters	Same as above

## SACRED HEART SCHOOL

### Monthly Syllabus – Session – 2024-25

**Class: XII**

**Subject: ENGLISH**

**Book: NCERT**

Month	Chapters/Topics	Learning Outcomes
April	The Last Lesson, Lost Spring , My Mother at Sixty-Six, Deep Water	Understand the historical context of the Franco-Prussian War and its impact on the people of Alsace-Lorraine. Develop empathy for the characters, especially Franz and his teacher, Monsieur Hamel, by understanding their emotions and perspectives. Develop empathy for the characters, especially Saheb and Mukesh, by understanding their struggles, aspirations, and resilience. Develop empathy for the speaker and her mother by understanding their emotions and the complexities of their relationship.
May	The Third Level, Keeping Quiet, Creative Writing Sills	Students can explore the themes of silence, introspection, and unity present in the poem. They can discuss how Neruda uses these themes to comment on human nature, society, and the need for contemplation in a busy world. Through discussion and reflection, students will evaluate the implications of the story's central concept—the existence of a third level of Grand Central Station—and its relevance to the characters' lives and broader societal issues. Conceptual Understanding, application of rules, Analysis, Reasoning, appropriacy of style and tone, using appropriate format and fluency, inference, analysis, evaluation and creativity

June	The Rattrap, Keeping Quiet,	Students will analyze the themes of deception, kindness, and redemption in "The Rattrap" by Selma Lagerlöf and consider their relevance to real-life situations. Students will identify and analyze poetic devices such as metaphor and symbolism in the poem, considering how they contribute to the overall meaning and mood.
July	Indigo, The Tiger King, Creative Writing Sills	Students will analyze the theme of colonialism and its impact on identity and culture in "Indigo," considering how historical events shape characters' lives and choices. Students will explore the cultural and historical context of pre-independence India, gaining insight into the social and political dynamics that shape the narrative. <b>Conceptual Understanding, application of rules, Analysis, Reasoning, appropriacy of style and tone, using appropriate format and fluency, inference, analysis, evaluation and creativity.</b>
August	Poets and Pancakes, A Thing of Beauty, Journey to the End of the Earth	Students will gain insight into South Indian culture and society through the portrayal of daily life, language, and customs in the story, fostering an appreciation for cultural diversity. Students will critically evaluate the poem's themes and ideas, considering alternative interpretations and the relevance of Keats's perspective to contemporary society. Students will analyze the theme of self-discovery and transformation in "Journey to the End of the Earth," considering how the protagonist's physical journey reflects her inner journey towards acceptance and resilience.
September	Revision	
October	The Interview, A Roadside Stand, The Enemy	Students will explore the social and cultural commentary embedded in the narrative, discussing issues such as class, gender, and power dynamics in postcolonial India. Students will critically evaluate the poem's themes and ideas, considering the implications of the characters' choices and the author's commentary on human nature and society. Students will grapple with ethical questions raised by the story, such as the morality of war and the complexities of forgiveness and reconciliation in the face of personal tragedy.
November	Going Places, Aunt Jennifer's Tigers, On the Face of It Memories of Childhood	Students will likely gain insights into themes such as ambition, the pursuit of identity, societal pressures, and personal choices. They may also develop an understanding of the complexities of human behavior and the impact of environment on individual growth and fulfillment. Additionally, they may reflect on the importance of adaptability and resilience in navigating diverse life experiences. Students are likely to grasp the themes of gender oppression, artistic expression, and the quest for personal autonomy. They may also gain insights into the ways in which societal expectations influence individual lives, particularly in terms of gender roles and domesticity. Additionally, they might contemplate the power of art as a means of self-expression and resistance against societal constraints. Students will learn about themes such as perception, loneliness, and the importance of human connection. They might gain insights into the challenges faced by individuals with physical disabilities and the ways in which they navigate societal attitudes and prejudices. Additionally, students may contemplate the complexities of human relationships and the transformative power of empathy and understanding. Students may reflect on the themes of nostalgia, loss, resilience, and the passage of time as portrayed in the chapter. Moreover, they may develop an appreciation for the role of memory in preserving and interpreting individual histories.
December	The Cutting of My Long Hair, We Too are Human Beings Creative Writing Sills	<b>Empathy and understanding:</b> Students may develop empathy and understanding towards individuals who navigate cultural complexities and identity struggles, fostering a more inclusive and compassionate worldview. The chapter prompts discussions about efforts to preserve and revitalize Indigenous cultures and languages, highlighting the importance of cultural heritage in maintaining identity and community cohesion.

January	Revision	
February	Annual Exam	
March	Annual Exam	

## EVALUATION

Exams	Chapters/Topics of Theory Exam	Internal Assessment
PT-1	The Last Lesson, Lost Spring , My Mother at Sixty-Six, Deep Water	
PT-2	The Last Lesson, Lost Spring , My Mother at Sixty-Six, Deep Water, The Third Level, Keeping Quiet, The Rattrap, Keeping Quiet, Indigo, The Tiger King, Creative Writing Sills, Poets and Pancakes, A Thing of Beauty, Journey to the End of the Earth	<b>INTERNAL ASSESSMENT</b> Assessment of Listening Skills - 05 marks. Assessment of Speaking Skills - 05 Marks Project Work - 10 Marks
Term-1	The Interview, A Roadside Stand, The Enemy	
Term-2	The whole syllabus/Board Exam	<b>INTERNAL ASSESSMENT</b> Assessment of Listening Skills - 05 marks. Assessment of Speaking Skills - 05 Marks Project Work - 10 Marks

# SACRED HEART SCHOOL

## Monthly Syllabus – Session – 2024-25

Class: XII

Subject: Maths

Book: NCERT

Month	Chapters/Topics	Learning Outcomes
April	Relations and functions Inverse Trigonometric Functions	Students Learned well
May	Matrices Determinants	Students Learned well
June	Continuity and Differentiability	Students Learned well
July	Application of Derivatives Integrals	Students Learned well
August	Integrals Application of Integrals	Students Learned well
September	Differential Equations	Students Learned well
October	Vector Algebra	Students Learned well
November	3D LPP	Students Learned well
December	Probability	Students Learned well
January	Revision	
February	Revision	
March	Exam	

## EVALUATION

<b>Exams</b>	<b>Chapters/Topics of Theory Exam</b>	<b>Internal Assessment</b>
PT-1	Chapters 01 02	Viva, copy activities
Term-1	Chapters 03,04 05	Viva, copy, activities
PT-2	Chapters 06,07 08	Viva copy activities
Term-2	Complete Syllabus	Viva, copy activities



# SACRED HEART SCHOOL

## Monthly Syllabus – Session – 2024-25

Class: XII

Subject: PHYSICAL EDUCATION

Month	Chapters	Topics
April	Unit – 1	<p>Management of sporting events</p> <ul style="list-style-type: none"> <li>*Functions of Sports Events Management (Planning, Organising, Staffing, Directing &amp;Controlling)</li> <li>. Various Committees &amp; their Responsibilities (pre; during &amp; post)</li> </ul> <p>Fixtures and their Procedures-Knock-Out (Bye &amp; Seeding) &amp; League (Staircase, Cyclic, Tabular method) and Combination tournaments.</p> <ul style="list-style-type: none"> <li>* Intramural &amp; Extramural tournaments - Meaning, Objectives &amp; Its Significance</li> <li>* Community sports program (Sports Day, Health Run, Run for Fun, Run for Specific Cause &amp; Run for Unity)</li> </ul>
May	Unit – 2	<p>Children &amp; Women in Sports</p> <ul style="list-style-type: none"> <li>*Exercise guidelines of WHO for different age groups.</li> </ul> <p>Common postural deformities-knock knees, flat foot, round shoulders, Lordosis, Kyphosis, Scoliosis, and bow legs and their respective corrective measures.</p> <ul style="list-style-type: none"> <li>* Women's participation in Sports - Physical, Psychological, and Social benefits.</li> <li>*Special consideration (menarche and menstrual dysfunction)</li> <li>* Female athlete triad (osteoporosis, amenorrhea, eating disorders)</li> </ul>
June	Unit – 3	<p>Yoga as Preventive measure for Lifestyle Disease</p> <ul style="list-style-type: none"> <li>*Obesity: Procedure, Benefits &amp; Contraindications for Tadasana, Katichakrasana, Pavanmuktasana, Matsayasana, Halasana, Pachimottansana, Ardha- Matsyendrasana, Dhanurasana, Ushtrasana, Suryabedhan pranayama.</li> <li>*Diabetes: Procedure, Benefits &amp; Contraindications for Katichakrasana, Pavanmuktasana, Bhujang asana, Shalabhasana, Dhanurasana, Supta- vajarasana, Paschimottanasana, Ardha-Mastyendrasana, Mandukasana, Gomukasana, Yogmudra, Ushtrasana, Kapalabhati.</li> <li>*Asthma: Procedure, Benefits &amp; Contraindications for Tadasana, Urdhwahastottansana, UttanMandukasan-a, Bhujangasana, Dhanurasana, Ushtrasana, Vakrasana, Kapalabhati, GomukhasanaMatsyaasana, Anuloma- Viloma.</li> <li>*Hypertension: Procedure, Benefits &amp; Contraindications for Tadasana, Katichakransan, Uttanpadasana, Ardha Halasana, Sarala Matyasana, GomukhasanaUttanMandukasan-a, Vakrasana, Bhujangasana, Makarasana, Shavasana, Nadi- shodhanapranayam, SitlipranayamUttanMandukasan-a, Vakrasana, Bhujangasana, Makarasana, Shavasana, Nadi- shodhanapranayam, Sitlipranayam.</li> <li>* Back Pain and Arthritis: Procedure, Benefits &amp; Contraindications of Tadasan, Urdhawahastootansana, Ardh-Chakrasana, Ushtrasana, Vakrasana, Sarala Maysyendrsana, Bhujandgasana, Gomukhasana, Bhadrasana, Makarasana, Nadi- Shodhana pranayama</li> </ul>
July	Unit – 4	<p>Physical Education &amp; Sports for CWSN (Children with Special Needs - Divyang)</p> <ul style="list-style-type: none"> <li>*Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics)</li> <li>*Concept of Classification and Divisioning in Sports.</li> <li>*Concept of Inclusion in sports, its need, and Implementation;</li> <li>*Advantages of Physical Activities for children with special needs.</li> <li>*Strategies to make Physical Activities assessable for children with special needs</li> </ul>
August	Unit – 5	<p>Sports &amp; Nutrition</p> <ul style="list-style-type: none"> <li>•Concept of balanced diet and nutrition</li> <li>*Macro and Micro Nutrients: Food sources &amp; functions</li> <li>*Nutritive &amp; Non-Nutritive Components of Diet</li> <li>*Eating for Weight control-A Healthy Weight, The Pitfalls of Dieting, Food Intolerance, and</li> </ul>

		<p>Food Myths</p> <p>*Importance of Diet in Sports-Pre, During and Post competition Requirements</p>
September	Unit – 6	<p>Test &amp; Measurement in Sports</p> <p>* Fitness Test - SAI Khelo India Fitness Test in school: Age group 5-8 years/ class 1-3: BMI, Flamingo Balance Test, Plate Tapping Test Age group 9-18yrs/ class 4-12: BMI, 50mt Speed test, 600mt Run/Walk, Sit &amp; Reach flexibility test, Strength Test (Partial Abdominal Curl Up, Push-Ups for boys, Modified Push-Ups for girls).</p> <p>* Measurement of Cardio- Vascular Fitness - Harvard Step Test - Duration of the Exercise in Seconds x100/5.5 X Pulse count of 1-1.5 Min after Exercise.</p> <p>*Computing Basal Metabolic Rate (BMR)</p> <p>*Rikli &amp; Jones - Senior Citizen Fitness Test</p> <p>Chair Stand Test for lower body strength</p> <p>Arm Curl Test for upper body strength</p> <p>Chair Sit &amp; Reach Test for lower body flexibility</p> <p>Back Scratch Test for upper body flexibility</p> <p>Eight Foot Up &amp; Go Test for agility</p> <p>Six-Minute Walk Test for Aerobic Endurance</p> <p>*Johnson - Metheny Test of Motor Educability (Front Roll, Back Roll, Jumping Half-Turn, Jumping full- turn</p>
October	Unit – 7	<p>Physiology &amp; Injuries in Sports</p> <p>.Physiological factors determining components of physical fitness</p> <p>*Effect of exercise on the Muscular System</p> <p>* Effect of exercise on the Cardio-Respiratory System</p> <p>•Physiological changes due to aging</p> <p>*Sports injuries: Classification (Soft Tissue Injuries -Abrasion, Contusion, Laceration, Incision, Sprain &amp; Strain; Bone &amp; Joint Injuries- Dislocation, Fractures Green Stick, Comminuted, Transverse Oblique &amp; Impacted)</p>
November	Unit – 8	<p>Biomechanics &amp; Sports</p> <p>*Newton's Law of Motion &amp; its application in sports</p> <p>*Types of Levers and their application in Sports.</p> <p>*Equilibrium-Dynamic &amp; Static and Centre of Gravity and its application in sports</p> <p>*Friction &amp; Sports</p> <p>*Projectile in Sports</p>
December	Unit – 9	<p>Psychology &amp; Sports</p> <p>* Personality; its definition types (Jung Classification &amp; Big Five Theory)</p> <p>*Motivation, its type &amp; techniques.</p> <p>*Exercise Adherence: Reasons, Benefits &amp; Strategies for Enhancing it</p> <p>*Meaning, Concept &amp; Types of Aggressions in Sports</p> <p>*Psychological Attributes in Sports - Self-Esteem, Mental Imagery, Self-Talk, Goal Setting</p>
January	Unit – 10	<p>raining in Sports</p> <p>•Concept of Talent Identification and Talent Development in Sports</p> <p>*Introduction to Sports Training Cycle - Micro, Meso, Macro Cycle.</p> <p>*Types &amp; Methods to Develop - Strength, Endurance, and Speed.</p> <p>* Types &amp; Methods to Develop - Flexibility and Coordinative Ability.</p> <p>* Circuit Training - Introduction &amp; its importance</p>
February	Revision	
March	Exam	



## EVALUATION

Exams	Chapters/Topics of Theory Exam	Internal Assessment
PT-1	Management of sporting events Children & Women in Sports	PORTFOLIO SUBJECT ENRICHMENT NOTE-BOOK PRACTICAL NOTE-BOOK INDEX
PT-2	Yoga as Preventive measure for Lifestyle Disease Physical Education & Sports for CWSN (Children with Special Needs - Divyang)	
Term-1	Management of sporting events Children & Women in Sports Yoga as Preventive measure for Lifestyle Disease Physical Education & Sports for CWSN (Children with Special Needs - Divyang) Sports & Nutrition	
Term-2	All Units	

# SACRED HEART SCHOOL

## Monthly Syllabus – Session – 2024-25

Class XII \_\_\_\_\_ Subject: \_\_\_COMPUTER SCIENCE \_\_\_\_\_ :Book  
\_\_\_\_\_ SUMITA AURORA \_\_\_\_\_

Month	Chapters/Topics	Learning Outcomes
April	PYTHON REVISION TOUR	The learning outcomes of Python Revision Tour 1 are: <ol style="list-style-type: none"><li>1. Understand the basics of Python programming language</li><li>2. Define variables and data types (strings, numbers, booleans, lists)</li><li>3. Use operators for arithmetic, comparison, and logical operations</li><li>4. Control program flow with conditional statements (if-else)</li><li>5. Use loops (for, while) for repetition</li><li>6. Write functions to reuse code</li><li>7. Understand the concept of modules and import statements</li><li>8. Apply programming concepts to solve problems</li><li>9. Develop problem-solving skills and logical thinking</li><li>10. Write clean, readable, and efficient code</li></ol>

May	python revision tour 2	<p>The learning outcomes of Python Revision Tour 2 are:</p> <ol style="list-style-type: none"> <li>1. Understand advanced data structures (dictionaries, sets, tuples)</li> <li>2. Use advanced list operations (slicing, indexing, sorting)</li> <li>3. Apply object-oriented programming concepts (classes, objects, inheritance)</li> <li>4. Define and use exceptions for error handling</li> <li>5. Understand file input/output operations (reading, writing, appending)</li> <li>6. Use regular expressions for pattern matching and text processing</li> <li>7. Apply advanced programming concepts (generators, decorators, lambda functions)</li> <li>8. Develop advanced problem-solving skills and logical thinking</li> <li>9. Write efficient and effective code using advanced techniques</li> <li>10. Apply Python programming to real-world applications and projects</li> </ol> <ul style="list-style-type: none"> <li>- Write Python programs using advanced data structures and object-oriented programming concepts</li> <li>- Apply file input/output operations and exception handling</li> <li>- Use regular expressions for text processing and pattern matching</li> <li>- Develop complex programs with advanced programming techniques</li> <li>- Analyze and solve real-world problems using Python programming</li> <li>- Apply Python programming to various applications and projects</li> </ul> <p>Note: The specific learning outcomes may vary based on the curriculum and course requirements.</p>
June	working with . python	<p>:Outcomes of working with Python are</p> <ol style="list-style-type: none"> <li>1. Understand the basics of Python programming language</li> <li>2. Write Python programs using variables, data types, operators, control structures, and functions</li> <li>3. Apply programming concepts to solve problems and automate tasks</li> <li>4. Develop problem-solving skills and logical thinking</li> <li>5. Write clean, readable, and efficient code</li> <li>6. Understand and use advanced data structures (lists, dictionaries, sets)</li> <li>7. Apply object-oriented programming concepts (classes, objects, inheritance)</li> <li>8. Use file input/output operations and exception handling</li> <li>9. Apply regular expressions for text processing and pattern matching</li> <li>10. Develop advanced programming skills using generators, decorators, and lambda functions</li> <li>11. Apply Python programming to various applications and projects (web development, data analysis, machine learning)</li> <li>12. Analyze and solve real-world problems using Python programming</li> </ol>
July	python libraries	<p>students will be able to understand how to use python libraries will be able to create python libraries</p>

August	file handling recursion	<p>[</p> <ol style="list-style-type: none"> <li>1. Understand the concept of recursion and its applications</li> <li>2. Define recursive functions and identify base cases</li> <li>3. Write recursive functions to solve problems</li> <li>4. Analyze and trace recursive function calls</li> <li>5. Understand the importance of termination conditions</li> <li>6. Apply recursion to solve problems in various domains (mathematics, data structures, algorithms)</li> <li>7. Develop problem-solving skills using recursive thinking</li> <li>8. Write efficient and effective recursive code</li> <li>9. Understand the trade-offs between recursion and iteration</li> <li>10. Apply recursion to real-world problems and applications</li> </ol> <p>By the end of learning recursion, students will be able to:</p> <ul style="list-style-type: none"> <li>- Write recursive functions to solve complex problems</li> <li>- Analyze and trace recursive function calls</li> <li>- Apply recursion</li> </ul>
September	algorithm efficiency data structure	<ol style="list-style-type: none"> <li>1. Understand the basic concepts of data structures (arrays, linked lists, stacks, queues, trees, graphs)</li> <li>2. Analyze the time and space complexity of data structures</li> <li>3. Implement data structures using various programming languages</li> <li>4. Apply data structures to solve real-world problems</li> <li>5. Choose the appropriate data structure for a given problem</li> <li>6. Understand the trade-offs between different data structures</li> <li>7. Develop problem-solving skills using data structures</li> <li>8. Write efficient and effective code using data structures</li> <li>9. Understand the importance of data structure operations (insertion, deletion, traversal, searching)</li> <li>10. Apply data structures to various applications and domains (algorithms, databases, file systems)</li> </ol>
October	computer network	<p>The learning outcomes of computer networks are:</p> <ol style="list-style-type: none"> <li>1. Understand the basic concepts of computer networks (LAN, WAN, Internet, protocols)</li> <li>2. Explain the OSI and TCP/IP models</li> <li>3. Identify and describe network topologies (bus, star, ring, mesh)</li> <li>4. Understand network devices (switches, routers, gateways, hubs)</li> <li>5. Explain network protocols (HTTP, FTP, SMTP, DNS)</li> <li>6. Understand network addressing (IP addresses, subnet masks, CIDR)</li> <li>7. Analyze network security threats and measures (firewalls, encryption, authentication)</li> <li>8. Understand network design and architecture</li> <li>9. Develop problem-solving skills for network troubleshooting and maintenance</li> <li>10. Apply network concepts to real-world scenarios and applications</li> </ol>

November	SQL INTRRRFACE PYTHON WITH	<ol style="list-style-type: none"> <li>1. Understand the basic concepts of SQL and relational databases</li> <li>2. Write SQL queries to retrieve and manipulate data</li> <li>3. Use SQL commands (SELECT, INSERT, UPDATE, DELETE) to manage data</li> <li>4. Understand data modeling and database design</li> <li>5. Use SQL functions and aggregates (SUM, AVG, MAX, MIN) to analyze data</li> <li>6. Write subqueries and join tables to combine data</li> <li>7. Use indexing and optimization techniques to improve query performance</li> <li>8. Understand database security and access control</li> <li>9. Apply SQL to real-world scenarios and applications (data analysis, business intelligence)</li> <li>10. Develop problem-solving skills using SQL</li> <li>1. Understand the basic concepts of SQL and relational databases</li> <li>2. Write SQL queries to retrieve and manipulate data</li> <li>3. Use SQL commands (SELECT, INSERT, UPDATE, DELETE) to manage data</li> <li>4. Understand data modeling and database design</li> <li>5. Use SQL functions and aggregates (SUM, AVG, MAX, MIN) to analyze data</li> <li>6. Write subqueries and join tables to combine data</li> <li>7. Use indexing and optimization techniques to improve query performance</li> <li>8. Understand database security and access control</li> <li>9. Apply SQL to real-world scenarios and applications (data analysis, business intelligence)</li> <li>10. Develop problem-solving skills using SQL</li> <li>1. Understand the basic concepts of SQL and relational databases</li> <li>2. Write SQL queries to retrieve and manipulate data</li> <li>3. Use SQL commands (SELECT, INSERT, UPDATE, DELETE) to manage data</li> <li>4. Understand data modeling and database design</li> <li>5. Use SQL functions and aggregates (SUM, AVG, MAX, MIN) to analyze data</li> <li>6. Write subqueries and join tables to combine data</li> <li>7. Use indexing and optimization techniques to improve query performance</li> <li>8. Understand database security and access control</li> <li>9. Apply SQL to real-world scenarios and applications (data analysis, business intelligence)</li> <li>10. Develop problem-solving skills using SQL</li> </ol>
December	SQL interface python with SQL	
January	Revision	
February		
March		

## EVALUATION

Exams	Chapters/Topics of Theory Exam	Internal Assessment
PT-1	python tour 1 python tour 2 working with function using python libraries	Assessing the students by giving python code and executing output.
PT-2	file handling recursion data structure computer networks	
Term-1	Chapters/Topics of Theory Exam python tour 1 python tour 2 working with function using python libraries file handling recursion data structure computer networks	
Term-2	all chapters	