

INDIAN SCHOOL SALALAH ACADEMIC YEAR 2024 – 25 MONTHLY SYLLABUS OF CLASS XII - SCIENCE



SALALAH			CANADA ENCOMPANI	Invov o ov					NABET
MONTH MARCH	The Last lesson My Mother at 66	PHYSICS ELECTRIC CHARGES AND FIELDS		REPRODUCTION IN PLANTS/HUMAN REPRODUCTION /REP.HEALTH	What is Computer Network and Types of Networks. Network devices and Network Topologies.Internet, URL, WWW and its applications, web, email. Website Static as well as Dynamic, Webpage and Website, Website Hosting, cookies, Problem Soving Question as per the CBSE pattern. Overview of NUMPY in PYTHON	Revision Tour -1 Functions: types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)	Relations and Functions Inverse trigonometric functions , Matrices	Unit VI Test & Measurement in Sports Fitness Test – SAI Khelo India Fitness Test in school:Age group 5-8 yrs/ 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 & Reach flexibility test, Strength Test (Abdominal Partial Curl Up, Push-Ups for boys, Modified Push-Ups for girls). Measurement of Cardiovascular Fitness- Harvard Step test Duration of the exercise in seconds x 100/5.5 x Pulse count of 1-1.5 Min after Exercise. Computing Basal Metabolic Rate (BMR) Rikli & Jones - Senior Citizen Fitness Test I. Chair Stand Test for lower body strength II. II. Arm Curl Test for upper body strength. III. Chair Sit & Reach Test for lower body flexibility. IV. Back Scratch Test for upper body flexibility V. Eight Foot up & Go Test for agility. Six Minute Walk Test for Aerobic Endurance Johnson – Metheny Test of Motor Educability (Front Roll, Back Roll, Jumping Half-Turn, Jumping Full-Turn.	Variations in Psychological Attributes
APRIL	The Third Level The Tiger King Lost Spring Keeping Quiet	ELECTROSTATIC POTENTIAL AND CAPACITANCE CURRENT ELECTRICITY	ALCOHOLS, PHENOLS AND ETHERS ALDEHYDES, KETONES AND CARBOXYLIC ACIDS	REPRODUCTION IN PLANTS/HUMAN REPRODUCTION /REP.HEALTH	Introduction to Python libraries- Pandas, Matplotlib, Data structures in Pandas - Series and data frames. Creation of series from dictionary, scalar value mathematical operations- ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION OF TWO SERIES series attributes- head and tail functions Accessing series, indexing, slicing, operations on series Data Frames: creation of data frames from dictionary of series-list of dictionaries	Mutable/Immutable Properties of Passed Data Objects, Programs using functions Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths, Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, Programs using Text File writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file		Unit III Yoga as Preventive measure for Lifestyle Disease Obesity: Procedure, Benefits & Contraindications for Tadasana, Katichakrasana, Pavanmuktasana, Matsayasana, Halasana, Pachimottansana, Ardha – Matsyendrasana, Dhanurasana, Ushtrasana, Suryabedhan pranayama Diabetes: Procedure, Benefits & Contraindications for Katichakrasana, Pavanmuktasana, Bhujangasana, Shalabhasana, Dhanurasana, Supta-vajarasana, Paschimottanasana, Ardha-Mastendrasana, Mandukasana, Gomukasana, Yogmudra, Ushtrasana, Kapalabhati Asthma: Procedure, Benefits & Contraindications for Tadasana, Urdhwahastottansana, UttanMandukasana, Bhujangasana, Dhanurasana, Ushtrasana, Vakrasana, Kapalbhati, Gomukhasana Matsyasana, Anuloma-Viloma. Hypertension: Procedure, Benefits & Contraindications for Tadasana, Katichakransan, Uttanpadasana, Ardha Halasana, Sarala Matyasana, Gomukhasana, UttanMandukasana, Vakrasana, Bhujangasana Makarasana, Shavasana, Nadi-shodhanapranayam, Sitlipranayam Back Pain and Arthritis: Procedure, benefits & Contraindications of Tadasana, Urdhawahastotansana, Arth-Chakrasana, Ushtrasana, Vakrasana, Sarla Maysyendra, Bhujangasana, Gomukasana, Bhadrasana, Makarasna, Nadi-Shodhana pranayama Unit VIII Biomechanics & Sports Newton's Law of Motion & its application in sports Equilibrium – Dynamic & Static and Centre of Gravity and its application in sports Friction & Sports Projectile in Sports Unit X Training in Sports Concept of Talent Identification and Talent Development in Sports Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle. Types & Method to Develop – Strength, Endurance and Speed Types & Method to Develop – Flexibility and Coordinative Ability Circuit Training-Introduction and its importance	Self and Personality
MAY	Deep Water Journey to the end of the earth Rattrap	MOVING CHARGES AND MAGNETISM MAGNETISM AND MATTER ELECTROMAGNETIC INDUCTION	ALDEHYDES, KETONES AND CARBOXYLIC ACIDS AMINES BIOMOLECULES	PRINCIPLES OF INHERITANCE /MOLECULAR BASIS OF INHERITANCE	iteration.Operations on rows and columns: add (insert /append) Operations on rows and columns: Fetch the data according to the condition. select, delete (drop column and row) REVISION rename, Head and Tail functions, indexing using labels, Boolean indexing. "Importing/Exporting Data between CSV files and Data Frames."		Continuity and differentiability Application of derivatives	Unit II Children & Women in Sports Exercise Guidelines of WHO for different Age Groups. Common Postural Deformities - Knock Knee; Bow Legs, Flat Foot; Round Shoulders; Lordosis, Kyphosis, and Scoliosis and their respective corrective measures Women's Participation in sports -Physical, Psychological and Social benefits. Special consideration (Menarche and Menstrual Dysfunction) Female Athlete Triad (Osteoporosis, Amenorrhea, Eating habits) Unit IX Psychology & Sports Personality; its definition & types (Jung Classification & Big Five Theory). Motivation, its Types & Technique Meaning, Concept & Types of Aggressions in Sports Psychological Attributes in Sports - Self Esteem, Mental Imagery, Self-Talk, Goal setting Briefing on Holiday Homework Discussion on Practical work	Meeting Life Challenges
JULY	A thing of Beauty Enemy	ALTERNATING CURRENT ELECTROMAGNETIC WAVES	CHAPTER - SOLUTIONS	EVOLUTION	Data Visualization : Purpose of plotting, drawing and saving of plots using Matplotlib (line plot, bar graph, histogram). Customizing plots	CSV file: import csv module, open / close csv file, write into a csv file using csv.writerow() and read from a csv file using csv.reader() write into a csv file using csv.writerow() and read from a csv file using csv.reader()	Application of derivatives,	Unit V Sports & Nutrition Concept of balance diet and nutrition Macro and Micro Nutrients: Food sources & functions Nutritive & Non-Nutritive Components of Diet Eating for wt. control Importance of diet- Sports –Pre, during and Post Competition requirements	Psychological Disorders
AUGUST	Indigo Aunt Jennifer's Tigers Poets and Pancakes	RAY OPTICS AND OPTICAL INSTRUMENTS WAVE OPTICS DUAL NATURE OF RADIATION AND MATTER	SOLUTIONS ELECTROCHEMISTRY CHEMICAL KINETICS	HUMAN HEALTH/ MICROBES IN HUMAN WELFARE/ PRINCIPLES OF BIOTECHNOLOGY	Adding label, title, and legend in plots. Disscusion and alloted the topics for the Projects Digital footprint, net and communication etiquettes, Data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, Free and open source software (FOSS), Cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act E-waste: hazards and management. Awareness about health concerns related to the usage of technology.	Database concepts: introduction to database concepts and its need Relation Data Model - Key Terms , SQL - DML , DDL SQL - Data type, Queries Queries SQL Functions	Application of derivatives Integrals Applications of integrals	Unit VII Physiology & Injuries in Sports Physiological factors determining components of physical fitness. Effect of exercise on Muscular System Effect of exercise on Cardio-Respiratory System Physiological change due to Aging Physiological change due to Aging Sports injuries: Classification (Soft Tissue Injuries -Abrasion, Contusion, Laceration, Incision, Sprain & Strain; Bone & Joint Injuries - Dislocation, Fractures - Green Stick, Comminuted, Transverse Oblique & Impacted) Unit IV Physical Education & Sports for CWSN (Children with Special Needs - Divyang) Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics) Advantages of Physical Activities for children with special needs. Strategies to make Physical Activities assessable for children with special needs.	Therapeutic Approaches
SEPTEMBER	The Interview	DUAL NATURE OF RADIATION AND MATTER (CONTI) REVISION TERM-1 EXAM	CHEMICAL KINETICS REVISION TERM-1 EXAM	APPLICATIONS OF BIOTECHNOLOGY REVISION TERM-1 EXAM	Revision of database concepts and SQL commands covered in class XI Types of Function in MySQL-Math functions: POWER (), ROUND (), MOD (). Revision for the Term-1 Examination	joins: cartesian product on two tables, equi-join and natural join Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup, Language (XML), domain names, URL, website, web browser, web servers, web hosting	Differential equations Vectors	Revision for Term -1 Exam Term -1 Practical's Revision for Term -1 Exam Term -1 Practical's	Attitude and Social Cognition
ост.	On the face of it A Roadside Stand Going Places Memories of Childhood	ATOMS NUCLEI SEMICONDUCTOR ELECTRONICS: MATERIALS, DEVICES AND SIMPLE CIRCUITS	D&F BLOCK ELEENTS COORDINATION COMPOUNDS	ORGANISMS AND POPULATION/ECOSYST EM/ BIODIVERSITY CONSERVATION	Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM (). Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME (). Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and manipulating data using Group by, Having, Order by. Querying and manipulating data using EQUI JOIN	"Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor," "display data by using fetchone(), fetchall(), rowcount, creating database connectivity applications" Connectivity programs Revision of Python topics covered in class XI	Vectors Three dimensional geometry Probablity	Unit I Management of Sporting Events Functions of Sports Events Management (Planning, Organizing, Staffing, Directing & Controlling) Various Committees & their Responsibilities (pre; during & post) Fixtures and its Procedures – Knock-Out (Bye & Seeding) & League (Staircase & Cyclic) Intramural & Extramural Tournaments – Meaning, Objectives & its Significance. Community Sports Program (Sports Day, Health Run, Run for Fun, Run for specific Cause & Run for Unity. Revision and discussion on sample question papers.(chapter wise)	Social Influence and Group Processes
NOV.	Memories of Childhood REVISION	SEMICONDUCTOR ELECTRONICS: MATERIALS, DEVICES AND SIMPLE CIRCUITS	REVISION	REVISION	Revision	Revision	Revision	Revision	Revision
DEC.	REVISION	PRE -BOARD EXAMS	PRE -BOARD EXAMS	PRE -BOARD EXAMS	PRE -BOARD EXAMS	PRE -BOARD EXAMS	PRE -BOARD EXAMS	PRE -BOARD EXAMS	PRE -BOARD EXAMS
JANUARY	REVISION	СРВ	СРВ	СРВ	СРВ	СРВ	СРВ	СРВ	СРВ
FEBRUARY	BOARD EXAMS	BOARD EXAMS	BOARD EXAMS	BOARD EXAMS	BOARD EXAMS	BOARD EXAMS	BOARD EXAMS	BOARD EXAMS	BOARD EXAMS