

Yearly Planner (2023-24)

Grade: 11

Subject - English

Month	Course Description	Learning Outcomes	Activities	No. of Periods
June				
June	The Portrait of a lady The Summer of the Beautiful White Horse Poster Making	Identify different expressions in the text and infer their meaning from the context. Apply the literal, interpretative and critical level of comprehending. Analyze the character, organize and present ideas coherently.	Write a character sketch highlighting the divine qualities of author's grandma. Reflect on the reasons for the growing isolation of elders in families. Create a self – composed poem. Recapitulate the theme, events, characteristic traits, concept of the lesson through an activity.	4
June	Gap Filling Editing Tasks	Comprehend an effective Poster making as a tool of Visual Communication (Tenses, clauses)		4

July A Photograph July Notice Writing (Writing Skills) The Address The Address	To encourage the students to appreciate poetry and read aloud with proper intonation to prepare the students for poetic forms and adept them with the figures of speech, rhyme and rhythm Groups would be formed according to the range of Learners and distributed the role of 5 Ws and frame a notice on the subject given. To facilitate making connections between similar situations in different storylines/life	Group discussion, interactive and peer assessment. Student participation is invited in fixing the importance of the title 'The Address'. Students could explore the importance of having a temporary/permanent address.	3
We are not Afraid to Die The Laburnum Top	To allow a problem solving: identifying the problem To interpret the poem by relating the theme to the	The facilitator will draw the student's attention to the topic by Asking questions like : • What is the meaning of dreams? • Are all dreams achievable?	4
Discovering	present-day context Understand, enjoy and		

	Tut The Saga Continues Letter Writing: Letter to the Editor	appreciate a factual text understand the meaning and usage of phrases like resurrection, circumvented, computed Tomography, scudded across etc iii)understand advancement in technology know about Egyptian belief of Mummification	Draw a flowchart to draw King Tut's Family line and their description
August	Ailing Planet	To enable the students to i) read effectively with proper voice modulation. ii) comprehend the chapter. iii) enhance their vocabulary. iv) analyse the situations and characters.	Books and pictures shown based on the main theme followed by discussions. *A debate on 'Law and Order in India' *A video clipping based on the theme. ii) Use of pictures from magazines and papers related to Earth
	Mother's Day	The students would be able to grasp the theme and meaning of the poem.	group work of 3 on poetry writing on the wind, sun, moon or snow- highlighting the pride in their narration.
August नक्कल व		struggles and sacrifices of parents and to draw inspiration from them. ii) strengthen the family bonding with sharing and solving problem.	Mother works from morning till night catering to the needs of everyone. Do we ever realize that she too is a human being and needs rest? Share your views about the role of mother in your life.
	Advertisement	and purpose of writing	

	(classified and display)	advertisements.		
September	Childhood The Adventure	To read and recognize the purpose of human loss and the hidden pathos and nuances of the lines, correlating them with personal experiences- to build up didactics, empathy and sympathy with the loss of the speaker and the final resigned acceptance and optimism.	Share your childhood experience(How you were innocent) ii) How can you define 'maturity'? Can we exactly say at what age you became mature? iii) discuss: Is attainment of maturity a sigh of loss of innocence?	
		To introduce the students to the genre of science fiction To facilitate making connections between similar situations in different storylines/life experiences.	Discuss in the group of two A single event may change the course of action of the History of a nation.	
	Note Making & Summarizing	The learners would be able to differentiate between annotation, outline notes, column notes, mind maps and summary notes from a text.	To summarize information from different written text, reconstructing arguments and accounts in a coherent presentation.	

	Re- arranging Jumbled words and Phrases	To be able to comprehend and use grammatical organization for quantifying and sentence completion.		
October	The Ghat of the only World	Identifying the Indian Diaspora. To enable the students to inculcate the values of accepting differences, understanding people, becoming sensible.	On a world map mark the Indian Diaspora in the world.	
	Silk Road	To identify the important of the Silk Make the pictorial presentation of the KORA completed by the protagonist of the lesson Road. explain what "goods" were traded via the Silk Road, including concepts such as ideas, religions, disease, etc	Make the pictorial presentation of the KORA completed by the protagonist of the lesson.	
	Speech Writing	The learners would be		

		able to organise their thoughts and express freely		
November	Father to Son Birth	The students will be able to i) Comprehend and appreciate poetry. ii) Learn new words. iii) Enhance understanding of literary devices. iv) Read with proper intonation and stress. To facilitate making Connections between similar situations in different storylines/life experiences	The teacher will keep on throwing statements related to reasons, consequences and ways to find solutions to the problem.	
December	The Tale of Melon City	To read and recognize the purpose of Pre-activities: Self- awareness Team work To enable the students to economy and the hidden satire, irony and pun in the nuances - to build up didactics on the role of democracy in a state	Classroom discussions based on - Examples of a kings and rulers. ii) Loud reading of the poem with voice intonation and modulation.	

		 identify the figures of speech and the rhyming scheme. iv) enhance their vocabulary. v) appreciate the theme and the style of writing of the poet. 	
January	Revision		
February	Revision-Exam		
March			



Yearly Planner (2023-24)

Grade: XI

Subject - Informatics Practices

Month	Course Description	Learning Outcomes	Activities	No. of Periods
June	2.Getting Started with Python 3.Python Fundamentals	 Students demonstrate Introduction of Python – Pluses Python – Some Minuses (So Humans Like) Working in Python Understand First Program/ Script Students can create Python Character Set Tokens Barebones of a Python Program Variables and Assignments Simple input and output 	 Install the python idle in a computer. Do activity in interactive mode and Script mode. Write a program that displays a joke. But display the punchline only when the user presses enter key. Write a program that displays a joke. But display the punchline only when the user presses enter key. Write a Python program that accepts radius of a circle and prints its area. Write a program to read a number n and print n², n³ and n⁴. Write a program to compute simple interest and compound interest. Write a program to read details like name, class, age of a student and then print the details firstly in same line and then in separate lines. Make sure to have two blank lines in these two different types of prints. 	15

July	Ch 1 INTRODUCTION TO COMPUTER SYSTEM	 The topic is very informative and its prime objective is to educate students about fundamentals of computer systems so that they can become "Digital Citizen" of India. After learning this chapter the student will be able to apply learn about: → What is Computer? → What are fundamental components of the Computer system- Input Unit, Output Unit, Central Processing Unit and Memory unit. → Evolution of Computer → Computer Memory- Primary Memory(RAM & ROM) and Secondary Memory, Cache Memory, Memory units. → What is Data Capturing, Data Storage and Data Retrieval. → What is Software , Need of Software , Types of Software → System Software - Operating System, System Utility, Device Drivers → Application Software. → Proprietary software & Free and Open Source Software. 	 Activity 1: List all secondary storage devices available in your school or home. Activity 2: Visit some of the places like bank, automobile showroom, shopping mall, tehsil office, etc., and find out 2–3 names of tools/instruments used to capture data in digital format. Activity 3: Explore possible ways of recovering deleted data or data from a corrupted device. Activity 4: Create a test file and then delete it using Shift+Delete from the keyboard. Now recover the file using the methods you have explored at Activity 5: Locate any two device drivers installed on your computer. Activity 6: Install one application software in your computer. 	20

	Ch 4 Data Handling	Students can create their own program using these functions	 Data Handling Write a program to obtain temperatures of 7 days (Monday, Tuesday Sunday) and then display average temperature of the week. Write a program to take year as input and check if it is a leap year or not. Write a program to take two numbers and print if the first 	
August	Ch 5 Flow of control	 Control Statements. Incluse, incluse, incluse, while loop, for loop Lists: list operations - creating, initializing, traversing and manipulating lists, list methods and built-in functions – len(),list(),append(),insert(), count(),index(),remove(), pop(), reverse(), sort(), min(),max(),sum() update(), del(), clear() The students will be able to create 	 Write a program to take a 2-digit number and then print the reversed number. That is, if the input given is 25, the program should print 52. Write a program that generates six random numbers in a sequence created with (start, stop, step). Then print the 	20
	Ch 6 List Manipulation	 the basics of List and its operations. Also they can understand the traversing a list with its inbuilt functions. They can manipulate the list. 	 mean, median and mode of the generated numbers. Flow of Control Write Python programs to sum the given sequences: 1² + 3² + 5² + + n² (Input n) Write a Python program to print every integer between 1 and n divisible by m. Also report whether the number that is divisible by m is even or odd. Write Python programs to sum the given sequences: 2/9 - 5/13 + 8/17 (print 7 terms) 	

			 List Manipulation Ask the user to enter a list containing numbers between 1 and 12. Then replace all of the entries in the list that are greater than 10 with 10. Write a program to check if a number is present in the list or not. If the number is present, print the position of the number. Print an appropriate message if the number is not present in the list. Create the following lists using a for loop: A list containing the squares of the integers 1 through 50. Write a program that takes any two lists L and M of the same size and adds their elements together to form a new list N whose elements are sums of the corresponding elements in L and M. For instance, if L = [3, 1, 4] and M = [1, 5, 9], then N should equal [4,6,13]. Write a program rotates the elements of a list so that the element at the first index moves to the second index, the element in the second index moves to the third index, etc., and the element in the last index moves to the first index. 	
September		Revision & Half Yearly Ex	am	
October	Ch 7 Dictionaries	 The students will be able to apply the basics of Dictionaries. Dictionary methods and built in functions They can manipulate the dictionaries. 	 Find the largest and smallest numbers in a list. Find the third largest number in a list. Find the sum of squares of the first 100 natural numbers. Find whether a string is a palindrome 	10

		 Finally student create the differences between List and Dictionaries. Dictionary: concept of key-value pair, creating, initializing, traversing, updating and deleting elements, dictionary methods and built-in functions – dict(), len(), keys(), values(), items() 	 or not. Given two integers x and n, compute xⁿ .Compute the greatest common divisor and the least common multiple of two integers. 	
	Ch 8 Understanding Data	After learning this chapter the student will be able to apply their knowledge in different activities • Data • Importance of Data • Types of Data • Data Collection • Data Storage • Data Processing • Statistical Techniques for Data Processing	 Explaining the definition of Data and its importance Introducing types of data viz Structured Data and Unstructured Data with examples Listing some examples of Data Collection Explanation about Data Storage by recalling Secondary Storage Devices Explanation of Data Processing with different real life examples Explanation of Measures of Central Tendency viz. Mean, Median and Mode with examples Explanation of Measures of Variability viz. Range, Standard Deviation with examples 	10
November	Ch 10 Database Concepts	 After learning this chapter the student will be able to apply their knowledge in different activities File System Limitations of File System Database Management System Need of shift to DBMS from File System Key Concepts of DBMS 	 Listing Candidate Keys and Primary Key for various data set in form of tables Identifying set of two tables with primary key and foreign key from real life data Identifying areas of real life environments where DBMS can be used 	10

		 Relational Data Model and its terminology Keys in a Relational Database History of MySQL MySQL Database system Starting MySQL 	 Writing Degree and Cardinality of different tables Solving MCQs and Exercises 	
December	Ch 11 Structured Querty Language	After learning this chapter the student will be able to apply their knowledge in different activities • Structured Query Language • Data types and Constraints in MySQL • DDL Commands in MySQL • Creating database • Creating table • Viewing structure of table • Altering table structure • Removing Table / Database • DML Commands in MySQL • Populating table with data • Querying table • Updating table data • Deleting table data	 Write about the commands (i) CREATE DATABASE (ii) CREATE TABLE (iii) USE (iv) INSERT INTO Querying using DDL and DML commands by providing table data Solving MCQs and Exercises 	20
January	Ch 12 Emerging Trends	 Immersive Experience with Extended Reality (XR) Introduction Artificial Intelligence Machine Learning (ML) Natural Language Processing (NLP) Robotics Big Data Characteristics of Big Data Data Analytics Internet of Things (IoT) Web of Things (WoT) Sensors 	 Activity 1: Find out how NLP is helping differently-abled persons? Activity 2: Find out what role are robots playing in the medical field? Activity 3: Explore and list a few loT devices available in the market. Activity 4: We use GPS to navigate outdoors. VPS is another emerging trend that uses Augmented Reality. Explore and find its other utilities. Activity 5: Name a few data centers in India along with the major services that they provide. 	

	 Smart Cities Cloud Computing Cloud Services Types of Clouds Grid Computing Blockchain Technology Blockchain Technology Keyterms How Blockchain Technology Works 		
Ch 9. Working with Numpy	 After learning this chapter the student will be able to apply their knowledge in different activities NumPy Arrays Anatomy of NumPy Arrays NumPy Arrays vs. Python Lists NumPy Data Types Creating NumPy ID Arrays Creating 2-dimensional NumPy Arrays How NumPy Arrays are Internally Stored Working with NumPy Arrays Accessing Individual Elements using Array Indexing Modifying the Values of NumPy Arrays Joining/Concatenating NumPy Arrays Obtaining Subsets of Arrays Arrithmetic Operations on NumPy Arrays Arrays Arrithmetic Operations on 1D NumPy Arrays Arrays Arrithmetic Operations on 2D NumPy Arrays Using Functions with NumPy Arrays Using count() and mode() with NumPy Arrays 	 Write a NumPy program to add, subtract, multiply, divide an ndarray, element-wise. Write a NumPy program to get the element-wise powers of an ndarray values. Write a NumPy program to calculate element-wise the absolute value. Write a NumPy program to create an ndarray with six random integers between 10 30. Write a NumPy program to create an ndarray of 3 * 3 size having random values. Find the mi and maximum values. Write a NumPy program to create a 10 * 4 ndarray having random values and extract the first E of the array and store them into another ndarray. 	10

February	Revision & Annual Exam
March	Annual Exam



Yearly Planner (2023-24)

Grade: XI

Subject -BIOLOGY

Month	Course Description	Learning Outcomes	Activities	No. of Periods
June	Chapter 1: The Living World	 Students will know and understand Need for classification Three domains of life Taxonomy and systematics Concept of species and taxonomical hierarchy Binomial nomenclature Tools for study of taxonomy Understand and differentiate between living and non-living. Group organisms on the basis of similarities and differences. 	 Parts of a compound microscope. Classification of 	8 periods
	Ch-2 BIOLOGICAL CLASSIFICATION 2A-Kingdom Monera 2B-Kingdom Protista 2C-Kingdom Fungi	 Define alternation of generation, dikaryon Identifies different mycelium, viruses, protozoans Understands the process of sexual reproduction in fungi, alternation of generation in plans Acquires the knowledge of different groups of animals. Appreciates the role of microbes in our daily life. 	living organisms and its economic importance.	+ 4period s

		Students will know and understand	Specimens/sli	
July	Ch3 Plant kingdom	 Salient features of major groups of plants Distinguishing features and examples of each category. Life cycles of bryophytes, pteridophytes, gymnosperms and angiosperms Students would be able to 1.Draw a labeled diagram to Show life cycles of bryophytes, pteridophytes, gymnosperms and angiosperms 2.Understand difference between gametophyte and sporophyte. 4.Understand formation of spores and gametes in different stages of life cycles 	des/models and identification with reasons - Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, forp	10 periods +
	Ch-4 Animal Kingdom	 Students will know and understand study of various organisms on various basis, categorisation of chordates and non-chordates their structure and appearance and occurrence Contrasting features of various phylum and their comparative study 	noss, iem, pine, one monocotyledo nous plant, one dicotyledonou s plant and one lichen	10 periods
August	Ch-5 Morphology of Flowering plants	 Enable the students to know and understand the morphology & modifications Root, Stem, leaf, Inflorescence, Flower, Parts of a flower, Fruit, Seed, Structure of dicot & monocotyledonous seed. Students are able to understand & describe a flower parts, writes floral formula with floral diagrams. Students are able to develop Skill of drawing the diagrams Enable the students to apply their learnt knowledge in real life situation. 	 Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae 	8 periods + 8 periods + 8 parioda
	Ch-6 Anatomy of plants	 Appreciate the diversity in anatomy of root, stem and leaf. define tissues Explain the types of tissues based on their ability to divide or not. Explain the features of parenchyma, 	can be substituted in case of particular geographical location)	perioas

	Ch-7 Structure Organization In Animals	 collenchyma and sclerenchyma. Differentiate among epidermal, vascular and ground tissue system. define conjoint, collateral, open, closed exarch and endarch vascular bundles Correlate the anatomy of root, stem and leaf. Students acquire knowledge about terms of chapter such as Biotic and abiotic components, productivity, decomposition, energy flow, nutrient recycling, detritus, humification, mineralization, standing crop, ecological succession etc. Students able to justify the claim that free flow of solar energy is required support ecosystem dynamics. They will be able to distinguish primary and secondary productivity, detritus and grazing food chain, standing crop and standing state. Students will be able to predict the changes in biotic community of a given abiotic environment. 	including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and
September	Ch-8 Cell-The basic unit of life Ch-9 Biomolecules	 Students understood how these cellular components are used to generate and utilize energy in cells Students will understand the cellular components underlying mitotic cell division. Students will apply their knowledge of cell biology to selected examples of changes or losses in cell function. Students are able to explain and apply cell theory Students will be able to know and understand the carbohydrates on the basis of number of carbon atoms and functional group. 	 Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials. Separation of plant pigments through paper chromatograp hy

		 Protein structure and function, zwitter ion, pH sensitivity, polymerization. Structure of nucleic acids and its function, difference between DNA and RNA, polymerization of nucleotides to form polymer. They would come to know and understand about enzymes and catalytic activity. 	•	
October	Ch-10 Cell Cycle and division	 Students will be able to know and understand cell division functions in reproduction, growth, and repair. The structural organization of a prokaryotic and eukaryotic genome. The major events of eukaryotic cell division that enable the genome of one cell to be passed on to two daughter cells. The chromosome number changes throughout the human life cycle 	 Mitosis in onion root tip cells and animals cells (grasshopper) from permanent slides. Different types of inflorescence (cymose and racemose). 	12 periods
November	Ch-11 Photosynthesis in higher plants	 Students will be able to: Recall the conducting tissues in plants and their components. define the terms diffusion, osmosis, guttation and plasmolysis; Explain various means of transport, types of transport, plant water relations, osmosis, plasmolysis, imbibition, long distance transport of water, Transpiration, movement of food and theories related to it. Categorize means of short distance transport in plants. Describe the pathways of water from root hair up to leaf; Explain the process and significance of transpiration: 	 Study of distribution of stomata on the upper and lower surfaces of leaves. Comparative study of the rates of transpiration in the upper and lower surfaces of leaves. Study of the 	8 periods + 10 periods

	Ch-12-Respiration in plants	 Understand and realize the different pathways in photosynthesis and different steps Appreciate the work of scientists behind the discovery of photosynthesis. Reason out the requirements of pigment molecules. Observe and derive inference from the experiments and activities. Develop the skill of doing 	rate of respiration in flower buds/leaf tissue and germinating seeds	
	Ch-13 Plant growth and development	 Students should understand the irreversible phenomena of plant growth and physiological activity of plant hormones during its development 	 Preparation and study of T.S. of dicot and monocot 	
December	Ch-14- Breathing And exchange of gases	 Students know the organs of respiration Terms like expiration, inspiration, Lung capacity Lung volume Etc. Understand the structure and working of Respiratory system, Mechanism of breathing. Know the regulation of respiration, Understand the need of maintaining healthy respiratory system Develop the skill of drawing diagram of respiratory system. 	roots and stems (primary). • Study of osmosis by potato osmometer. • Study of plasmolysis in epidermal peels	8 periods + 8 periods
January	Ch-15 Body fluids and their circulation	 Students will know and understand All the components of human circulatory system Mechanism of coagulation of blood Concept of human blood group Describe circulatory pathways Describe cardiac cycle Understand electrocardiograph 	 Test for presence of urea, sugar, albumin, bile salts in urine. 	8 periods + 8 periods

	Ch-16 Excretory products and their elimination	 State the function of the urinary system Name the products of excretion Describe the structure of the urinary system. Recall that urine is stored in the bladder. Describe the function of the kidneys in filtering the Bloodstream. Describe the function of the skin in excretion 	
February	Ch-17- Locomotion and movement	 Understand the structure and function of types of muscles and skeletal system. Critically analyses the various movements related to joints in the skeletal system. Appreciate the mechanism of muscle contraction takes place in our body and how effectively they bring movement along with the skeletal system. Design Creative methods/techniques to bring a positive change in the life style so as to prevent the various diseases related to muscle and bone. Develop citizenship by visualizing and observing the given scenario (arthritis, gout, osteoporosis, muscular dystrophy) in day to day lives and present it in the form of a skit to sensitize others. 	 Virtual specimens/sli des/models and identifying features of - Amoeba, Hydra,liverfluk e, Ascaris, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard,
	Ch-18 –Neural control and coordination	 Students will know and understand the Coordination to maintain homeostasis. Mechanism of generation and conduction of nerve impulse Concept of transmission of impulse through synapse. Understand functions of different parts of brain. 	pigeon and rabbit. • Human skeleton and different types of joints with the help of virtual

	Ch-19- Chemical coordination and integration	 After completing this unit, you will be able to : Describe the chemical classification of hormones. Compare hormone action in case of protein and steroid hormones. Describe the mammalian endocrine system. Describe the neuroendocrine connection and the mechanism by which hypothalamus regulates the secretion from pituitary. Discuss hormonal imbalance and its role in various diseases. 	images/model s only
March	Result		

PT1- Ch-1,2,3,4 Half yearly-1-9 Ch



Yearly Planner (2023-24)

Grade: XI

Subject – General Studies

Month	Course Description	Learning Outcomes	Activities	No. of Periods
June/July	Aims and objectives of General Studies	 Students will be able to: 1. imbibe scientific temper by developing a rational attitude involving disbelief in superstitions and respect for integrity, objectivity and scientific method; 2. gain awareness about the changing concept of time and space in which mutual interdependence among countries has assumed added significance for the survival of humanity and to accentuate the importance of peace and economic cooperation; 3. highlight the importance of and need for conserving and promoting ecological balance and 	 Role play organized by students to present the life history of freedom fighters. 	5 periods

		 take practical steps for not only checking the unhindered depletion of natural resources, but also find other alternatives to preserve and enhance them; 4. develop pride in the rich cultural heritage as well as in the multipronged achievements of the country in various fields such as politics, agriculture, Science and technology, education and industry; 5. Inculcate constitutional values and imbibe the spirit of secularism and national unity; 6. be conversant with contemporary socio-economic problems of the country like illiteracy, poverty, social disharmony, sex or caste discrimination etc 		
August/Septe mber	Science and technology	 Highlight Science as a necessary part of our everyday life. Explore emerging technologies. Analyze the impact of Science and emerging technologies on our lives. 	prepare a projects (in groups of 5-7 students) where some models based on emerging technologies may be presented and explained such as solar panels, rain water harvesting, e- waste management, etc.	5 periods

October/ November	Understanding social structure	 Acquaint the students with the basic and distinctive features of the society they live in. Enable the students to understand different types of social institutions of their society. Understand the functions and significance of different social institutions of Indian society. 	 Conduct a survey in the school, exploring the relationship between economic status and occupation. Document examples of social relations witnessed by them in their neighborhood. They may then work in groups and prepare a small skit showcasing the same. Prepare a questionnaire containing 5-7 questions, collect data and analyze the findings by seeking opinion from different people of various age groups on different social 	5 periods
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		institutions. 4. Work in groups of 5-6 and present a glimpse of Indian culture by preparing scrapbooks, collecting photographs or making PowerPoint presentations.
December Protection of environment	 Identify the available natural resources. Create awareness about factors causing the depletion of natural resources. Discuss the implications of the rising world population. Outline the importance of and need for conserving and promoting ecological balance. Inspire students to adopt an environment friendly lifestyle. 	 make presentations on initiatives and conservation movements made by individuals and organizations. Study their surroundings, 5 enlist local species and learn more about them. Design a plan to keep the school premises clean and save paper/paper/e lectricity. Attempt an

			audit of water/electricit y use at home/ in the school and explore the possibility for reducing their consumption.
January	National unity	 Discuss the meaning and importance of national integration. Appreciate how the national movement against British rule helped in national integration. Identify the challenges to national integration in our country. Appreciate the concept of secularism in the Indian context. 	 Form a Youth Parliament in the class. It may function through a democratic process of working by choosing a cabinet, discussion and voting on a bill relating to prescribed dress code for students in educational institutions. Collect passages/quotes with universal messages from world literature and these may be posted on display boards. write creative slogans on the themes that unite people of different

	communities, for
	example, music,
	cricket, etc, and
	present them on
	display boards
	 Read selected
	biographies of great
	leaders and
	organize book
	discussions.
	Actively participate
	in NCC, NSS,
	Scouting and
	Guiding activities.

February	International understanding	 Acquaint the students with the need, scope and importance of international understanding. Elaborate the structure, types and functions of different international organizations working for international harmony. Outline the importance of human rights with special reference to women and children. Create awareness about the importance of their rights and duties towards clean environment, peace and mutual cooperation. Throw light upon how interdependence among countries has assumed added significance for the survival of humanity. outline the importance of peace and economic cooperation 	 Read selected material, for example, "Education for International Understandin g" by Reuben R. Palm, United Nations brochure on peace keeping Work in pairs and visit the websites of different international organizations, for example, UNICEF or UNESCO. They may then act as representative s of these organizations and a mock press conference may be arranged, where some students may ask questions 	5 periods
			ask questions about the	

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	ongoing
	projects,
	policies and
	mandates of
	the chosen
	organizations.
	Discuss how
	advances in
	technology
	have changed
	the dynamics
	of
	international
	understanding
	. The
	students'
	inputs may be
	recorded by a
	representative
	chosen by the
	class. The
	class may be
	asked to
	submit an
	article for the
	school
	magazine
	based on the
	discussion



Yearly Planner (2023-24)

Grade: 11

Subject - Math

Month	Course Description	Learning Outcomes	Activities	No. of Periods
June	Sets	 Draw and interpret Venn diagrams of set relations and operations and use Venn diagrams to solve problems. Perform operations on sets 	To Verify that the set had n number of elements, then the total number of subsets is 2 ⁿ	8
	Relation and Functions	 Perform operations on functions, including adding, subtracting, multiplying, and dividing functions. Determine the characteristics of the graph that results from these operations. Determine the nature of the graph of different functions 	To verify that for two sets A and B, n (A×B) = pq and the total number of relations from A to B is 2^{pq} , where n(A) = p and n(B) = q.	10
July	Trignometric Function	Students understand how trigonometric functions relate to right triangles and solve word problems involving right triangles. They extend the definitions of the trigonometric functions beyond right triangles using the unit circle and they	To find the values of sine and cosine functions in second, third and fourth quadrants using their given values in first quadrant	12

	measure angles in radians as well as degrees. The draw and analyze graphs of trigonometric functions		
	1. Students understand deductive and inductive reasoning		
Principal of	2. Students differentiate the type of reasoning		
mathematical inducti	3. Students prove different types of statements containing n		8
	4. Students appreciate the variety of mathematical statements		
Complex numbers	 Describe the need for extending the set of real numbers to the set of complex numbers; Define a complex number and cite examples; Identify the real and imaginary parts of a complex number; 	To obtain a quadratic function with the help of linear functions graphically	4

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August	Complex numbers	 State the condition for equality of two complex numbers; Properties of complex numbers Calculate conjugate and properties of complex numbers 		6
	Linear Inequalities	 Students will able to identify the regions on a graph that represent the solution to a system of inequalities, sketch a graph to represent a system of linear inequalities in order to solve them, identify the system of linear inequalities represented by a graph. 	To verify that the graph of a given inequality, say $5x + 4y - 40 < 0$, of the form $ax + by + c < 0$, a, b > 0, c < 0 represents only one of the two half planes.	8
	Permutation and combination	After studying this lesson on the students will be able: ➤ To develop an understanding of the concept	To find the number of ways in which three cards can be selected from given five cards	8

		 of a permutation. ➤ To build skills simplifying expressions involving factorial notation. ➤ To Define a permutation and explain how to calculate it. ➤ To explains what a factorial is and its relation to permutations. ➤ To state that permutation is an arrangement and write the meaning of . ➤ To apply the knowledge of permutations in practical situations. 		
September	Permutation and combination	After studying this lesson the students will be able: ➤ To State that a combination is a selection and write the meaning of ➤ To Distinguish between permutations and combinations ➤ To solve some actual Combination and factorial problems. ➤ To develop an understanding of the concept of a Combination. ➤ To apply the knowledge of combinations in practical situations.		7
October	Binomial theorem	Students will be able to learn statement and	To construct a Pascal's Triangle and to write binomial	10

	 Froor Binomial Theorem for positive power Students will be able to recognize Patterns in expansion of binomial theorem. Students will be able to learn general terms of binomial theorem. Students will be able to learn Middle Terms of binomial theorem. Students will be able to evaluate a binomial coefficient in binomial expansion Students will be able to find a particular term in binomial expansion. Students will be able to apply binomial theorem in expansion and in approximations 	expansion for a given positive integral exponent.	
Sequence and Series	 Students will be able to define Sequences and Series. Students will be able to distinguish Sequences and Series. Students will be able to understand Arithmetic progression. Students will be able to evaluate General term of AP/ Sum to n-terms of AP / 	To obtain formula for the sum of squares of first n-natural numbers.	10

Sequer	nce and Series	Students will be able to inderstand Geometric Progression. Students will be able to evaluate General term of GP/Sum to interms of GP /Geometric mean. • Students will be able to understand the relationship between A.M and G.M. • Students will be able to understand and evaluate Sum to n terms of special series.	To demonstrate that the Arithmetic mean of two different positive numbers is always greater than the Geometric mean.	
November Straight	nt lines	 D ENABLE THE STUDENTS D KNOW AND NDERSTAND Slope of a line – Slope of a line when co ordinates of any two points on the line are given Conditions for Parallelism and perpendicularity of lines in terms of their slopes Angle between two lines Collinearity of three points Various forms of Equation of a line : Horizontal and Vertical lines .Points – slope form of line , Two – point form of line , Slope-intercept form of line , Intercept for	To verify that the equation of a line passing through the point of intersection of two lines a1 x + b1 y + c1 =0 and a2 x + b2 y + c2 = 0 is of the form (a1 x + b1 y + c1) + λ (a2 x + b2 y + c2) = 0.	12
		 Normal form of line General form of a Line Different forms of Ax + By + C = 0 viz., Slope-intercept form , Intercept form , Normal form . Distance of a point from a Line and Distance between two parallel lines 		
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December	Conic Section	 Students will be able to have the knowledge of conic section, equation of circle, equation of parabola, equation of ellipse, equation of hyperbola. Students will be able to understand the different types of conic section, equation of circle, equation of parabola, equation of ellipse, equation of hyperbola. Students will be able to draw the different types of conic sections. Students will be able to apply the knowledge of conic sections to solve the problems. Students will be able to apply the knowledge the knowledge of conic sections in their daily life. 	Construct a parabola	8
	Introduction to 3-D	 Students will able to Identifying the position 		8

		of the point on 3D SPACE • Finding the distance between two points on 3-D plane • Application of section formula		
January	Limits and Derivatives	Student will able to 1) Find limit of a function and derivative of a function 2) evaluate derivative of a function using first principle 3) find derivative using different rules 4)geometrical meaning of derivative 5)apply this derivative in different day today activities. le in daily life.	Verification of the geometrical significance of derivative.	10
	Statistics	 Students learn about Measures of Dispersion like - > Range > Quartile Deviation > Mean Deviation > Variance > Standard Deviation. 2. Students get to know about Mean Deviation for grouped data and ungrouped data. 3. Students learn about Variance and Standard Deviation for – > Grouped data > Ungrouped data > Discrete frequency distribution 		8

		 Continuous frequency distribution 4. Students are enlightened about the short-cut method to find Variance and Standard Deviation. 5. Students also learn about Coefficients of Variation and to an extent learn how to apply these concepts of Statistics in real life 		
February	Probability	 The students will learn: To acquaint students with different aspects of mathematics used in daily life. To develop an interest in students to study mathematics as a discipline. Students will observe the outcomes of the random experiment. They will relate the set of all possible outcomes to a set 'S' the sample space. They are able to relate event E of S as the subset of S They understand the measure of uncertainty through P(E). They will apply the concept of P(E) in many day to day 	To write the sample space, when a coin is tossed once, two times, three times, four times.	7

	situations.	
March		



Yearly Planner (2023-24)

Grade: XI

Subject – Physical Education

Month	Course Description	Learning Outcomes	Activities	No. of Periods
	Changing Trends andCareers in Physical Education	 Recognize the concept, aim, and objectives of Physical Education. Identify the Post- independence development in Physical Education. Categorize Changing Trends in Sports- playing surface, wearable gear, sports equipment, technological Explore different careeroptions in the field of Physical Education. 	 To teach students about the development of physical education in India after Independence. Students know the different career options available in the field, know about the Khelo India Program. 	8 periods
June	Olympism Value Education	 Make out the development of Khelo India and Fit India Program. Incorporate values ofOlympism in your life. Differentiate between Modernand Ancient Olympic Games,Paralympics, and Special Olympic games Identity the Olympic Symbol and Ideals Describe the structure of theOlympic movement structure 	 students aware of Concepts and Olympics Values (Excellence, Friendship & Respect) students learn about Olympic Value Education – Joy of Effort, Fair Play, Respect for Others, Pursuit of Excellence, Balance AmongBody, Will & 	+ 4period s

			Mind	
July	Yoga	 Recognize the concept of yoga and be aware of the importance; of it Identify the elements of yoga Identify the Asanas, Pranayama's, meditation, and yogic kriyas Classify various yogicactivities for the enhancement of concentration Know about relaxation techniques for improving concentration. 	 make the students aware of the meaning and importance of yoga make them learn about Astanga yoga. To teach students about yogic kriya, specially shat karmas. To make the learn and practice types of Pran To make them learn the importance of yoga in stress 	10 periods + 10 periods
			management. Students will watch	

		 Identify the concept of Disability and 	an informational video lesson outlining stress management techniques like yoga. Fundamentals and poses. Follow up with an application activity.
August	Physical Education and Sports for Children with Special Needs	 Identify the concept of Disability and Disorder. Outline types of disability and describe their causes and nature. Adhere to and respect children with special needsby following etiquettes. Identify possibilities and scope in adaptive physical education Relate various types of professional support for children with special needsalong with their roles and responsibilities. 	 To make the students aware concept of Disability and Disorder. To make students aware of different types of disabilities. To make students learn about Disability + Etiquette Education To make students aware of role of various
	Physical Fitness, Wellness, and Lifestyle	 Explain wellness and its importance and define the components of wellness. Classify physical fitness and recognize its importance in life. Distinguish between skill-related and health-related components of physical fitness. 	professionals for children with special needs. To make the students understand the Meaning & importance of Wellness, Health, and Physical Fitness

	 Illustrate traditional sports and regional games to promote wellness. Relate leadership through physical activity and sports Illustrate the different stepsused in first aid - 	 To make students aware of the Components/ Dimensions of Wellness, Health, and Physical Fitness
	PRICE.	 To make students learn Traditional Sports & Regional Games to promote wellness
		 To develop Leadership qualities through Physical Activity and Sports in students. To make students learn FirstAid and its management
		skills To make the students Understand the aims and objectives Adaptive Physical students will
		watch an informational video lesson, Follow up with an application

			activity	
September	Test, Measurement &Evaluation	 Define the terms test, measurement, and evaluation, Differentiate norm andcriterion referenced standards, Differentiate formative and summative evaluation, Discuss the importance of measurement and evaluation processes, Understand BMI: A popular clinical standard and its computation Differentiate between Endomorphy, Mesomorphy &Ectomorphy h describe the procedure of Anthropometric Measurement. 	 To Introduce the students with the terms like test, measurement and evaluation along with its importance To introducing them the methods of calculating BMI, Waist- hip ratio and Skin fold measurement. To make the students aware of the different somatotypes. To make the students learn the method to measure health-related fitness. 	
October	Fundamentals of Anatomy, Physiology inSports	Identify the importance of an atomy and physiology.Recognize the functions of the skeleton.	The students will learn the meaning and definition & identify the	

		 Understand the functions ofbones and identify various types of joints. Figure out the properties andfunctions of muscles and understand how they work. Understand the anatomy of the respiratory system and describe it's working. Identify and analyses the layout and functions of Circulatory System 	 importance of anatomy, physiology, and kinesiology. Students will understand the main functions and Classification of Bone and the Types of Joints. The students will learn the Properties and Functions of Muscles. The students will learn the Structure and Functions of the Circulatory System and Heart. The students will learn the Structure and Functions of Respiratory System. 	
November	Fundamentals Of Kinesiology And Biomechanics in Sports	 Orderstand Amesiology and biomechanics with their. Application in sports. Explain biomechanical principles and their utilization in sports and physical education. 	will learn the meaning and definition & I identify the I importance of	periods + 10 periods

		 Illustrate fundamental body movements and their basicpatterns. Learn about the Axis and Planes and their application with body movements. 	Kinesiology and Biomechanics in sports. • To make the students learn the principles of biomechanics.
			To make the students understand the concept ofKinetics and Kinematics in Sports
			 To make the students learn about different types of bodymovements.
			To make the students understand the concept of Axis and Planes and its application in body movements.
December	Psychology and Sports	 Identify the role of Psychology in Physical Education and Sports Differentiate characteristics of growth and development at different stages. Explain the issues related toadolescent behavior and Team Cohesion in Sports Correlate the psychological concepts with the 	 The students will identify the definition and importance of Psychology in Physical Education and 8 periods + 8 periods

		sports and a thlete specific situations	sports.
			 The students will be able to differentiate characteristics of growth and development at different stagesStudents will be able toidentify the issues and management related to adolescents. The students will be able to understand the importance of team cohesion in sports. Students will distinguish different Psychological Attributes like
			Attention, Resilience, and Mental Toughness.
January	Training & Doping in Sports	 Understand the concept andprinciples of sports training. Summarise training load and its concept. 	 To make the students aware about of concepts and principles of sports training. 8 periods + 8 periods
		 Understand the concept of warming up & 	To make students

		 limbering downin sports training and their types, method & importance. Acquire the ability to differentiate between the skill, technique, tactics & strategies in sports training. Interpret concept of doping. 	learn and understand the Training Load, Over Load, Adaptation, and Recovery concepts. • To make students Understand the importance of warning up and limbering down exercises. To introduce the terms like Skills, Techniques, Tactics, and Strategies to the students.
			To make students aware of the doping substances and their disadvantages in sports
Ţ	Training & Doping in Sports	 Understand the concept andprinciples of sports training. Summaries training load and its concept. Understand the concept of warming up & limbering downin sports training and their types, method & importance. Acquire the ability to differentiate between the skill, technique, tactics & strategies in sports training. 	

	Interpret concept of doping.	



Yearly Planner (2023-24)

Grade: XI

Subject - Chemistry

Month	Course Description	Learning Outcomes	Activities	No. of Periods
June	Chapter 1. Some basic concepts of chemistry	After studying this unit students will be able to: Appreciate the role of chemistry in different spheres of life. 2.Explain the characteristics of three states of matter classify different substances 3.Explain various laws of chemical combination 4.Appreciate significance of atomic mass, average atomic mass, molecular mass , mole, concentration of solution in different units 5.Perform stoichiometric calculations.		14
July	Chapter 2: structure of atom	 The students will understand discovery of subatomic particles. They will understand various atomic models. Understand the nature of EM waves and terminologies associated. Relate the failure of one atomic model to overcome the drawbacks of the same to frame a new theory. Know and understand quantum numbers and will be able to write electronic configuration. 	1.Basic Laboratory Technique	16
August	Chapter:3 classification of elements and periodicity in	1. students will be able to comprehend genesis of periodic classification of	2. Determination of melting point of an	12 8

	properties Chapter–4: Chemical bonding and molecular structure	 elements e.g. laws of triads and octaves, Mendeleev's law 2.Understand the Modern Periodic Law; relate the significance of atomic number and electronic configuration 3.Nomenclature Z>100. 4. Classify elements into s, p, d, f blocks and learn their main characteristics; 5. The students will understand periodic trends in properties of elements. 1.Understand Kossel Lewis approach to chemical bonding; 2. Explain the octet rule and its limitations 	organic compound. 3. Determination of boiling point of an organic compound. 4.Crystallization of impure sample of Copper Sulphate.	
September	Chapter–4: Chemical bonding and molecular structure (contd)	Student will be able to 3.Describe the VSEPR theory and predict the geometry of simple molecules; 4.Explain the valence bond approach 5.Explain the different types of hybridization involving s, p and d orbitals and draw shapes of simple covalent molecules; 6.Describe the molecular orbital theory ; 7.Explain the concept of hydrogen bonding	 5 Preparation of standard solution of Oxalic acid. 7. Determination of strength of a given solution of Sodium hydroxide by titrating it against standard solution of Oxalic acid. 	10
October	Chapter–7 Redox reaction: Chapter–5 Thermodynamics	 Redox reaction: After studying this unit students will be able to : 1. Define the terms oxidation, reduction, redox reaction, oxidizing agent and reducing agent. 2. comprehend oxidation number concept. 	6.Determination of pH of some solutions obtained from fruit juices, solution of known and varied concentrations of acids, bases and salts using pH paper or universal indicator	6 1 6

		3.understand types of redox reaction .4. Balance chemical equations using half		
		reaction method After studying this unit student will be able to		
		1.Explain thermodynamic terms		
		2.State first law of Thermodynamics and express it mathematically.		
		3. Explain state functions: correlate ΔU and ΔH .		
		4. Calculate enthalpy changes for various types of reactions.		
		5. State and apply Hess's law of constant heat summation.		
		6.Explain entropy as a Thermodynamic state function and apply it for spontaneity.		
		7. Explain Gibbs energy change.		
November	Chapter–8:Organic Chemistry- some basic principle and techniques	After studying this unit student will be able to: 1.understand reasons for tetra valence of carbon and shapes of organic molecules; 2. Write structures of organic compounds classification and name the compounds according to IUPAC system 3. Understand the concept of organic reaction mechanism. 4 Methods of purification ,qualitative and quantitative analysis	 8. Preparation of standard solution of Sodium carbonate. 9. Determination of strength of a given solution of hydrochloric acid by titrating it against standard Sodium Carbonate solution. 	16
December	Chapter–9 Hydrocarbons	Students will be able to : 1Distinguish between alkanes, alkenes, alkynes and aromatic hydrocarbons on the basis of physical and chemical properties; 2. Name hydrocarbons according to IUPAC	Qualitative Analysis	12

		 system of nomenclature 3.Draw and differentiate between various conformations of ethane; 4. comprehend the structure of benzene, explain aromaticity and understand mechanism of electrophilic substitution reactions of benzene. 5. Predict the directive influence of substituent's in monosubstituted benzene ring. 		
January	Chapter: 6 Equilibrium	Students will be able to understand 1. Dynamic nature of equilibrium involved in physical and chemical processes 2.Law of equilibrium, 3. Establish a relationship between Kp and Kc. 4.Various factors that affect the equilibrium state of a reaction 5.classify substances as acids or bases according to Arrhenius, bronsted-Lowry and Lewis concepts, classify acids and bases as weak or strong in terms of their ionization constants, 6. Buffer solutions, calculate solubility product .	Qualitative Analysis	16
February	Chapter: 6 Equilibrium (contd)			
March				

PT -1:	Chapter 1. Some basic concepts of chemistry
	Chapter 2: structure of atom
PT -2	Chapter 3: classification of elements and periodicity in properties
	Chapter–4: Chemical bonding and molecular structure Chapter–7 Redox reaction:
PT -3 :	Chapter-5 Thermodynamics
	Chapter-8:Organic Chemistry- some basic principle and
	techniques
Final Exam	Full portion



Yearly Planner (2023-24)

Grade: XI

Subject - Physics

Month	Course Description	Learning Outcomes	Activities	No. of Periods
June	Chapter - 1 Units and Measurements	 By the end of this Unit students should be able to: 1. Handle tools and laboratory apparatus properly; 2. measures physical quantities using appropriate apparatus, instruments, and devices; such as, scales, vernier calipers, screw gauge 3. Units of measurement; systems of units; SI units, fundamental and derived units, significant figures. 4. Dimensions of physical quantities, dimensional analysis and its applications. 	 Practical 1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume. 2. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm. 	10
July	Chapter -2 Motion in Straight line	 By the end of this Unit students should be able to: 1. The learner differentiates between certain physical quantities; such as, between distance and displacement; speed and velocity; rectilinear and 	 Practical 1. To measure diameter of a given wire and thickness of a given sheet using screw gauge. 2. To determine mass of a given body 	10
		curvilinear motions; average, relative, and instantaneous velocity and speed;	using a metre scale by principle of moments.	

		 applies concepts of physics in daily life with reasoning while decision making and solving problems; such as, maximum possible speed of a car on a banked road; 		
	Chapter – 3 Motion in Plane	 By the end of this Unit students should be able to 1. Distinguish between Scalar and vector quantities. 2. Understand position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number 3. Able to do addition and subtraction of vectors resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of uniform velocity and uniform acceleration, projectile motion, uniform circular motion. 		10
August	Chapter -4 Laws of Motion	 By the end of this Unit students should be able to: 1. Understand Intuitive concept of force, Inertia, 2. Describe and explains Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. 3. Explain conditions for Equilibrium of concurrent forces. 4. Define and explain - Static and 	 Practical 1. To determine radius of curvature of a given spherical surface by a spherometer. 2. To plot a graph for a given set of data, with proper choice of scales and error bars. 	12

	Chapter–5: Work, Energy and Power	 kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion By the end of this Unit students should be able to: 1. Describe and explain the exchange among potential energy, kinetic energy, and internal energy for Simple mechanical systems, such as a pendulum a roller coaster, a spring. A freely falling object. Predict velocities, heights, and spring Compressions based on energy Conservation. 		12
September	Chapter–6: System of Particles and Rotational Motion	 By the end of this Unit students should be able to: 1. Use the relationship between torque and angular momentum according to Newton's second law, as well as its application in solving problems involving rigid bodies. 2. Specify the angular speed. angular velocity off a rotating body. Determine the velocity and acceleration of a point in the rotating body. 	 Practical 1. To find the weight of a given body using parallelogram law of vectors. 2. To measure the force of limiting friction for rolling of a roller on a horizontal plane. 3. To study the effect of detergent on surface tension of water by observing capillary rise. 	10
	Chapter–7: Gravitation	By the end of this Unit students should be able to:1. Understand Kepler's laws of planetary motion, universal law of gravitation.		10

		 Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape speed, orbital velocity of a satellite. 		
October	Chapter–8: Mechanical Properties of Solids	 By the end of this Unit students should be able to: 1. The learner recognizes different processes used in Physics-related industrial and technological applications; such as, knowledge of strength of materials used for structural design of columns, beams and supports while designing a building; 	 Practical To find the force constant of a helical spring by plotting a graph between load and extension. To observe and explain the effect of heating on a bi-metallic strip. To note the change in level of liquid in a container on heating and interpret the observations. 	7
	Chapter–9: Mechanical Properties of Fluids	 By the end of this Unit students should be able to: 1. The learner understands hydrostatic problems, motion of fluids. 2. Identify derivation of basic equations of fluid mechanics and apply 		8
	Chapter–10: Thermal Properties of Matter	 By the end of this Unit students should be able to: 1. Different methods of heat transfer, Concept of thermal expansion and Laws of cooling. 2. Define Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous 		8

		 expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity. 3. Understand qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law . 		
November	Chapter–13: Oscillations	 By the end of this Unit : 1. Learners will be able to understand the basic concept of generation of waves along with its classification and mathematical analysis and SHM. 2. Learners will be able to understand the concept of different forms of energy possessed by a body executing SHM with its mathematical analysis. 3. Learners will be able to understand the concept of resonance, free oscillations the concept of SHM. 	 Practical 1. Using a simple pendulum, plot its L- T2 graph and use it to find the effective length of second's pendulum. 2. To study variation of time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result. 	14
December	Chapter–14: Waves	 By the end of this Unit students should be able to: 1. Understanding of concepts, derivations, inferences and phenomena of interference of waves and beats 2. Application of knowledge of waves in relevant situations like Doppler Effect. 	 To study the relation between frequency and length of a given wire under constant tension using sonometer. To study the relation between the length of a given wire and tension for constant frequency using Sonometer. To find the speed of sound in air at room temperature using a resonance tube by two resonance positions. 	12
January	Chapter11: Thermodynamics	By the end of this Unit students should be able to understand : 1. Thermal equilibrium and definition of	 To observe change of state and plot a cooling curve for molten wax. 	12

		 temperature, heat, work and internal energy 2. First law of thermodynamics, isothermal & adiabatic processes. 3. Second law of thermodynamics: reversible and irreversible processes, eat engine and refrigerator 			
February	Chapter–12: Kinetic Theory	 By the end of this Unit students should be able to Understand : 1. Equation of state of perfect gas, work done in compressing a gas. 2. Kinetic theory of gases-assumptions, concept of pressure. 3. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom. 4. law of equi-partition of energy and application to specific heat capacities of gases; concept of mean free path, Avogadro's number. 	1.	To study the effect of load on depression of a suitably clamped metre scale loaded at (i) its end (ii) in the middle.	8
March	Result				



Yearly Planner (2023-24)

Subject – Artificial Intelligence

Month	Course Description	Learning Outcomes	Activities	No. of Periods
August	Employability Skills 1.COMMUNICATION SKILLS III	 Student will be able to understand > Demonstrate knowledge of various methods of communication > Identify specific communication styles > Demonstrate basic writing skills 	 Writing pros and cons of written, verbal and non-verbal communication Listing do's and don'ts for avoiding common body language mistakes Observing and sharing communication styles of friends, teachers and family members and adapting the best practices Role plays on communication styles Demonstration and practice of writing sentences and paragraphs on topics related to the subject 	1
August	3.ICT SKILLS III	 Student will be able to understand ➢ Create a document on word processor ➢ Edit, save and print a document in word processor 	 1.Demonstration and practice of the following: Listing the features of word processing Listing the software packages for word processing Opening and exit the word processor Creating a document 2.Demonstration and practicing the following: 	1

Grade: XI

			 Editing the text Word wrapping and alignment Changing font type, size and face Inserting header and footer Removing header and footer 3.Using autocorrect option 4.Insert page numbers and bullet 5.Save and print a document 	
		Knowledge-Define AI and ML		
August	Subject Specific skills 1.Introduction of AI	Comprehension-What are the AI products/applications in society and how are they different from non-AI products applications? Evaluation-What kind of jobs may appear in the future?	 Open Google 's Teachable Machine Try out AI for Oceans Open Learnml.eu/artbot.php on your web browser 4. 	2
September	Subject Specific skills 3.Math For Al	Comprehension – Linear Algebra, Statistics, Basics of Graphs and Set theory Application – Application of Math in Al Synthesis – Representing data in term of mathematical formula	Collect data from at least 20 students on "Daily Time on Netflix / Moblie Gaming ". Arrange in a tabular from as follows.	2
September		Revision & HYE Exa	am	
October	Math For Al	Comprehension – Linear Algebra, Statistics, Basics of Graphs and Set theory Application – Application of Math in Al Synthesis – Representing data in term of mathematical formula	Calculate variance and standard deviation of this data. What can you refer from the variance?	2
October	Unit 2: AI Applications and Methodologies	Knowledge – Where can AI be applied (like in the field of Computer vision, Speech, Text, etc.), What is deep learning?	 Create a coffee bot for ordering a coffee Make a simple chat bot Try Shadow art 	2

		Comprehension – How AI will impact our society Analysis – How should we get ready for the AI age (future)	4. Affectiva Market Research Demo	
October	2.Self-Management Skills III	Demonstrate impressive appearance and grooming Demonstrate team work Apply time management strategies and techniques	 Group discussion on qualities of a good team Group discussion on strategies that are adopted for team building and team work Game on time management Checklist preparation To-do-list preparation 	2
	Unit 4: AI Values (Ethical decision making)	Knowledge – Ethics, Bias, Impacts of bias on society Application – Spot issue in data, Make arguments, Apply rules	 Play the bias game Understand the future of automated media manipulation by either uploading your own photos 	2
November	4.ENTREPRENEURIA L SKILLS-III	 Describe the significance of entrepreneurial values and attitude. Demonstrate the knowledge of attitudinal changes required to become an entrepreneur. 	 Listing of entrepreneurial values by the students. Group work on identification of entrepreneurial values and their roles after listing or reading 2-3 stories of successful entrepreneur. Exhibiting entrepreneurial values in Ice breaking, rapport building, group work and home assignments. Preparing a list of factors that influence attitude in general and entrepreneurial attitude. Demonstrating and identifying own entrepreneurial attitudes during the following micro lab activities like thematic appreciation test Preparing a short write-up on "who am I" 	2

			 Take up a product and suggest how its features can be improved Group activity for suggesting brand names, names of enterprises, etc. 	
December	Unit 5: Introduction to story telling	Skill – Imagination, mapping the plot into key events increasing memory retention. Application- Helping in creating blogs, videos, and other content	AI Lab Activity given in their book	2
December	Unit 6: Critical and Creative thinking (Skills)	Skill – Understanding the problem and being able to express the same Creativity – To be able to develop/innovate from design a solution	AI Lab Activity given in their book	2
December	Unit 7: Data Analysis (Computational thinking) (Skills)	Knowledge – Types of structured data, statistical principals – frequency tables, mean, median, mode, range, etc. Application – Representing data in terms of graphs, statistical models Synthesis – To be able to represent a simple problem in terms of numbers.	Al Lab Activity given in their book	2
January	Unit 8: Regression (Knowledge)	Knowledge – Correlations, Regression, and other related terms . Applications – Being able to relate data with regression and correlation. Everyday applications of these mathematical concepts.	AI Lab Activity given in their book	2
January	Unit 9: Classification& Clustering (Knowledge)	Knowledge – What is classification and its types, what kind of problems may be placed under the category of a classification problem Applications – Where to apply classification principals Analysis – Impact of the application of incorrect algorithms on society. Knowledge – Clustering problems and its application, why is it called clustering Application – Application of clustering problem using standard models	Al Lab Activity given in their book	2
January	Unit 10: AI Values (Bias awareness)	Knowledge – What is ethics, Impact of ethics on society, the impact of bias on	AI Lab Activity given in their book	2

		AI functioning Evaluation – Biases in data, how to de-bias or neutralize the biased data Application – Finding bias in acquired dataset		
January	5.GREEN SKILLS - III	Describe importance of main sector of green economy Describe the major green Sectors/Areas and the role of various stakeholder in green economy	 Preparing a poster on any one of the sectors of green economy Writing a two-page essay on important initiatives taken in India for promoting green economy Preparing posters on green Sectors/ Areas: cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries 	2
February		Revision & Annual E	xam	
March	Annual Exam			



Yearly Planner (2023-24)

Grade: XI

Subject – Physical Education

Subject In charge's name: Mr. Arvind Shirke

Month	Course Description	Learning Outcomes	Activities	No. of Periods
June	Changing Trends and Careers in Physical Education	 Recognize the concept, aim, and objectives of Physical Education. Identify the Post- independence developmentin Physical Education. Categorize Changing Trendsin Sports- playing surface, wearable gear, sports equipment, technological Explore different careeroptions in the field of Physical Education. 	 To teach students about thedevelopment of physical education in India after Independence. Students know the different career options available in the field, know aboutthe Khelo India Program. students awareof 	8 periods + 4periods

Olympism Value Education	 Make out the development of Khelo India and Fit India Program. Incorporate values ofOlympism in your life. Differentiate between Modernand Ancient Olympic Games,Paralympics, and Special Olympic games Identity the Olympic Symboland Ideals Describe the structure of theOlympic movement structure 	Concepts and Olympics Values (Excellence, Friendship & Respect) • students learn about Olympic Value Education – Joy of Effort, Fair Play, Respect for Others, Pursuit of Excellence, Balance AmongBody, Will & Mind
Yoga July	 Recognize the concept ofyoga and be aware of the importance; of it Identify the elements of yoga Identify the Asanas, Pranayama's, meditation, and yogic kriyas Classify various yogicactivities for the enhancement of concentration Know about relaxation techniques for improving concentration. 	 make the students awareof the meaning and importance of yoga make them learn aboutAstanga yoga. To teach students about yogic kriya, specially shat karmas. To make the learn and practice types of Pran To make them learn the importance of yoga in stress management.

			Students will watch an informational video lesson outlining stress management techniques like yoga. Fundamentals and poses. Follow up with an application activity.
August	Physical Education and Sports for Children with Special Needs	 Identify the concept of Disability and Disorder. Outline types of disability and describe their causes and nature. Adhere to and respect children with special needsby following etiquettes. Identify possibilities and scope in adaptive physicaleducation Relate various types of professional support for children with special needsalong with their roles and responsibilities. 	 To make the students awareconcept of Disability and Disorder. To make students aware of different types of disabilities. To make students learn about Disability Etiquette Education To make students aware of role of various professionals
	Physical Fitness, Wellness, and Lifestyle	 Explain wellness and its importance and define thecomponents of wellness. Classify physical fitness andrecognize its importance in life. Distinguish between skill-related and health-relatedcomponents of physical fitness. 	 for children with special needs. To make the students understand the Meaning & importance of Wellness, Health, and Physical Fitness To make students aware of the Components/

		 Illustrate traditional sports and regional games to promote wellness. Relate leadership through physical activity and sports Illustrate the different stepsused in first aid - PRICE. 	 Dimensionsof Wellness, Health, and Physical Fitness To make students learn Traditional Sports & RegionalGames to promote wellness
			 To develop Leadership qualities through PhysicalActivity and Sports in students. To make students learn First Aid and its management skills
			To make the students Understand the aims and objectives Adaptive Physical students will watch an informational video lesson, Follow up with an application activity
September	Test, Measurement &Evaluation	 Define the terms test, measurement, and evaluation, Differentiate norm and criterion referenced standards, 	• To Introduce the students with the terms like test, measurement and evaluationalong

		 Differentiate formative and summative evaluation, Discuss the importance of measurement and evaluation processes, Understand BMI: A popularclinical standard and its computation Differentiate between Endomorphy, Mesomorphy &Ectomorphy h describe the procedure of Anthropometric Measurement. 	with its importance10 periods• To introducing them the methods of calculating BMI, Waist- hip ratio and Skin fold measurement.Skin fold measurement.• To make the students awareof the different somatotypes.To make the students learnthe method to measure health-related fitness.
October	Fundamentals of Anatomy, Physiology in Sports	 Identify the importance of anatomy and physiology. Recognize the functions of the skeleton. Understand the functions of bones and identify various types of joints. Figure out the properties and functions of muscles and understand how they work. Understand the anatomy of the respiratory system and describe it's working. 	 The students will learn themeaning and definition & identify the importance of anatomy, physiology, and 12 periods Students will understand themain functions and Classification of Bone and the Types of Joints.

		 Identify and analyses thelayout and functions of Circulatory System 	 The students will learn the Properties and Functions of Muscles. 	
			• The students will learn the Structure and Functions of the Circulatory System andHeart.	
			The students will learn the Structure and Functions of Respiratory System.	
November	Fundamentals Of Kinesiology And Biomechanics in Sports	 Understand Kinesiology andBiomechanics with their. Application in sports. Explain biomechanical principles and their utilizationin sports and physical education. Illustrate fundamental body movements and their basicpatterns. Learn about the Axis and Planes and their applicationwith body movements. 	The students will learn the meaning and definition & identify the importance of Kinesiology and Biomechanics in sports. • To make the students learnthe principles of biomechanics.	8 periods + 10 periods
			• To make the students understand the concept of Kinetics and	
			 Kinematics inSports To make the students learn about different types of body movements. 	
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			To make the students understand the concept ofAxis and Planes and its application in body movements.	
December	Psychology and Sports	 Identify the role of Psychology in Physical Education and Sports Differentiate characteristicsof growth and developmentat different stages. Explain the issues related toadolescent behavior and Team Cohesion in Sports Correlate the psychological concepts with the sports andathlete specific situations 	• The students will identify the definition and importance of Psychology in Physical Education and sports.	
			 The students will be able to periods differentiate + characteristics of 8 growth and periods development at different stages Students will be able toidentify the issues and management related to adolescents. 	

		 able to understand the importance ofteam cohesion in sports. Students will distinguish different Psychological Attributes like Attention, Resilience, and Mental Toughness. To make the 	
January Training & Doping inSports	 Understand the concept andprinciples of sports training. Summarise training load andits concept. Understand the concept of warming up & limbering downin sports training and their types, method & importance. Acquire the ability to differentiate between the skill, technique, tactics & strategies in sports training. Interpret concept of doping. 	 students awareabout of concepts and principles of sports training. To make students learn and understand the Training Load, Over Load, Adaptation, and Recovery concepts. To make students Understand the importanceof warning up and limberingdown exercises. To introduce the terms like Skills, Techniques, Tactics, and Strategies to 	8 periods + 8 periods

		the students.
		To make students aware of the doping substances and their disadvantages in sports.
	 Understand the concept andprinciples of sports training. Summaries training load andits concept. 	
Training & Doping inSports	• Understand the concept of warming up & limbering downin sports training and their types, method & importance.	
	 Acquire the ability to differentiate between the skill, technique, tactics & strategies in sports training. Interpret concept of doping. 	