## **RAINBOW PUBLIC SCHOOL**

**AFFILIATED TO C.B.S.E** (+2)

Month-Wise Syllabus for <u>Std:-'XI'</u> (Arts) (Session : 2025-26)

# Subject: English

Month	No. of W. Days	Chapters to be covered	Period	Half Yearly	Annual
April	19				
May	12				
June	14	Hornbill – 1. We're not Afraid to Die. 2. Discovering Tut Hornbill – 1. The Portrait of a Lady; 2. A Photograph (Poem). Snapshot– 1. The Summer of the Beautiful WhiteHorse; Grammar – Tenses (Usage/Gap filling exercise). Reading – Factual Passages. Writing – Letter writing.			
July	25	Hornbill – 3. The Laburnum (Poem).  Grammar – Transformation of sentences, Reordering of sentences.  Reading – Discursive passages.  Writing – 1. Speech/Debate  2. Classified Advertisement.			
August	20	Hornbill – 1. The Adventure 2. The Voice of the Rain (poem).  Snapshot – The Address.  Grammar – 1. Error correction, 2. Phrases.  Reading – Summarizing  Writing – Formal letter (Official/Business letters, Letter to Principal/ Editor.			
September	09	Revision for Half Yearly Examination			
October	16	Hornbill – Father to son + Silk Road (Poem).  Grammar – Clauses  Reading – Subtitling  Snapshot – Mothers Day  Writing – Report writing			
November	19	Hornbill – 1. Childhood (Poem)  Snapshot – 2. Birth + The tale of Meloncity.  Grammar – Exercises on clauses.  Reading – Comprehension  Writing – Advertisement			

		Hornbill – The Adventure Silk Road		
December	22	<b>Grammar</b> – Modals		
		Writing – Writing a CV.		
		Snapshot – The Tale of Melon City (Poem).		
1.	19	<b>Grammar</b> – Editing.		
January		Reading – Note Making		
		<b>Writing</b> – Speech / Debate.		
February	17	Revision for Annual Examination	·	

# **Subject: History**

Subject Teacher: - .....

Month	Section Title	Contents	Period	Half yearly	Annual
April (19)					
May (12)					
June (14)					
July (25)	I Early Societies	<ul> <li>Ch-1: Writing and City Life</li> <li>Iraq, 3<sup>rd</sup> millennium BCE.</li> <li>(a) Growth of towns</li> <li>(b) nature of early Urban Societies</li> <li>(c) Historians' Debat on uses of writing.</li> <li>Timeline (6<sup>th</sup> Mya to 1 BCE)</li> </ul>			
Aug. (20)	II Empires	<ul> <li>Ch-2: An Empire across three continents</li> <li>Introducing the periods of the empires.</li> <li>The Roman empire-history of a major world empire.</li> <li>Roman's contacts with the subcontinent empires</li> <li>Slavery</li> <li>Timeline (100 BCE to 1300 CE)</li> </ul>			
Sept. (09)	II Empires	<ul> <li>Ch-3: Nomadic Empires</li> <li>Different nomadic societies and their institutions.</li> <li>Locate the places in the map and comprehend the spread of the nomadic societies.</li> <li>Life of pastoralist society.</li> <li>Life of Genghis Khan</li> <li>Socio-political and economical changes.</li> <li>Revision For Half Yearly Examination</li> </ul>			

Oct. (16)	III Changing Traditions	<ul> <li>Ch-4: The three orders</li> <li>An introduction to Feudalism</li> <li>The three orders</li> <li>Factors affecting social and economical relations.</li> <li>A Fourth order? New towns and towns people.</li> <li>The crisis of the 14<sup>th</sup> century</li> <li>Timeline (1300 BC to 1700 BC)</li> </ul>		
Nov. (19)	III Changing Traditions	<ul> <li>Ch-5: Changing Culture Traditions</li> <li>The revival of Italian cities</li> <li>The Humanist view of History</li> <li>Science and Philosophy: The Arabs' contribution.</li> <li>Artists and Realism</li> <li>A new concept of human beings.</li> <li>The Aspiration of women</li> <li>Debates within Christianity.</li> <li>The Copernican revolution.</li> <li>Reading of Universe</li> <li>Was there a European 'Renaissance' in the 14<sup>th</sup> century?</li> </ul>		
Dec. (22)	IV Towards Modernisation	<ul> <li>Ch-6: Displacing Indigenous people</li> <li>European Imperialism</li> <li>The Native people</li> <li>The Native people lose their land</li> <li>The Gold rush, and Growth of Industries.</li> <li>The winds of change</li> <li>Timeline (1700 to 2000</li> </ul>		
Jan. (19)	IV Towards Modernisation	<ul> <li>Ch-7: Path to Modernisation</li> <li>Introduction</li> <li>The political system: Japan</li> <li>Modernising the economy</li> <li>Aggressive Nationalism</li> <li>Westernisation and Tradition</li> <li>Re-emerging as a Global economic power.</li> </ul>		
Feb. (17)	IV Towards Modernisation	<ul> <li>China: Establishing the republic</li> <li>The rise of the communist party of China</li> <li>Establishing the new Democracy: 1949-65</li> <li>Reform from 1978</li> <li>The Story of Tiwan</li> <li>Two roads of Modernisation</li> </ul> Revision For Annual Examination		

## **SUBJECT: GEOGRAPHY**

Month	No. of Working Days	Section Title	Contents
April	19		
May	12		
June	14		
		Book-1 (Physical Geography) Unit-I Geography as a discipline	<ul> <li>Ch-1:</li> <li>Geography as a discipline</li> <li>Geography as a integrating discipline.</li> <li>Physical Geography and Natural Science.</li> <li>Geography and Social science.</li> <li>Branches of Geography.</li> <li>Physical Geography 2 its importance.</li> </ul>
July	25	Book-2 India : (Physical Environment) Unit-I Introduction	Ch-1: India Location  • Size  • India and its neghbours.
		Book-3 Geography Practical	Ch-1: Introduction to Maps.
		Book-2 India : Physical Environment	Ch-2: Structure and Physiography  The Peninsular Block The Himalayas 2 other peninsular mountains.
Aug.	20	Book-2 Unit – II	<ul> <li>Ch-2: (Structure &amp; Physiography)</li> <li>Indo-Ganga Brahmputrap plain</li> <li>Physiography</li> <li>The North and Northeastern mountains.</li> <li>The Peninsular plateau</li> <li>The Indian Desert</li> <li>The coastal plains</li> <li>The Islands</li> </ul>
		Book-1 Unit – II The Earth	<ul> <li>Ch-2: The Origin and Evolution of the Earth.</li> <li>Early Theories: Origin of the Earth.</li> <li>Modern Theories: Origin of the Universe.</li> <li>The Star formation</li> <li>Formation of plants</li> <li>Our Solar system.</li> </ul>

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		Book-1 Unit – II	<ul> <li>Evolution of the Earth</li> <li>Evolution of lithosphere.</li> <li>Evolution of Atmosphere and hydrosphere</li> <li>Origin of life.</li> </ul> Ch-3: Interior of Earth <ul> <li>Source of information about the interior</li> <li>Direct sources</li> <li>Indirect sources</li> </ul>
Sept.	09	Book-1 Unit – II Book-3	<ul> <li>Ch-3: Interior of Earth</li> <li>Earth quake</li> <li>Earth quake waves</li> <li>Effect of Earth quake</li> <li>Structure of the Earth.</li> <li>Volcanoes.</li> <li>Volcano landforms.</li> </ul> Ch-2: Map Scale.
Oct.	16	Book-2 Unit – II Book-1 Unit – II	Ch-3: (Drainage system)  Drainage system of India The Rivers system of the Himalayan Drainage The Ganga system The Brahmaputra system. The peninsular Drainage system. Smaller Rivers flowing towards the west. Small rivers flowing towards the west. River regimes.  Ch-4: (Distribution of ocean and continents) Continental Drift. Evidence in support of continental Drift. Force of Drifting. Post drift studies. Distribution of Earthquakes 2 volcanoes. Plate Tectonics. Movement of Indian plate.

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		Book-2	Ch-4: Climate
		Unit – III	<ul> <li>Unity and Diversity in the monsoon climate.</li> </ul>
		Climate,	Factor Determing the climate of India.
		Vegetation & Soil	<ul> <li>Mechanism of weather in the winter season.</li> </ul>
			Mechanism of weather in the summer season.
			N. C. V.
			Rain Bearing system and Rainfall.
			Break in the Monsoon
			The Hot weather season
			The Southwest Monsoon season
			<ul> <li>Monsoon winds of the Bay of Bengal.</li> </ul>
			Characteristics of Monsoon of Rainfall.
Nov.	19		Season of Retreating Monsoon.
			Traditional Indian season
			Monsoons and the Economic life in India.
		Book-1	Ch-5: Geomorphic Processes
		Unit – III	Geomorphic Processes.
		Landforms	Endogenic Processes.
			Exogenic processes.
			Weathering
			Biological Activity & Weathering
			Mass movements
			Erosion & Deposition
			Soil Formation
		Book-2	Ch-5: Natural Vegetation
		Unit – III	Tropical Evergreen Forest
			Tropical Deciduae Forest
			Tropical Thorn Forest
Б			Montana Forests
Dec.	22		Littoral and Swamp forests
			Forest cover in India.
			Biosphere Reserve.
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		Book-3	Ch. 4: Man Projection
			Ch-4: Map Projection
		Book-1	<b>Ch-6</b> : Landforms and their Evolution.
		Unit – III	Running water
			Erosional landforms
			Incised or entrenched meanders
			Depositional landforms
			Depositional fandrofffis     Deltas
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Jan.	19		Ground water
			• Caves
			• Landforms
		Book-1	<b>Ch-7</b> : Composition and structure of Atmosphere.
		Unit – IV	Composition of the Atmosphere.
		Climate	<b>Ch-8 :</b> Solar Radiation, Heat Balance & Temperature.
			Solar radiation
			- Doint Indianon

		Book-2 Unit – IV Natural Hazards and Diasters: Causes. Book-3	<ul> <li>Variability of Insolation at the surface of the Earth</li> <li>Heating and cooling of Atmosphere.</li> <li>Heat Budget of the planet Earth</li> <li>Inversion of Temperature.</li> <li>Ch-6: Natural hazards and Diasters</li> <li>Classification of natural diasters</li> <li>Natural Diasturs and hazards in India.</li> <li>Ch-4: Map projections.</li> </ul>
Feb.	17	Book-1 Unit – IV Book-1 Unit – V (Water)	Ch-9: Atmospheric circulation and weather systems.  Atmospheric pressure  World distribution of sea level pressure  Forces Affecting the velocity and direction of wind.  Ch-10: Water in the Atmosphere  Evaporation and condensation  Types of Rainfall  Ch-11: World climate & Climate change  Koeppen's scheme of classification of climate.  Climate change.  Ch-12: (Water) (oceans)  Hydrological cycle.  Relief of the ocean floor.  Division of the ocean floor.  Temperature of ocean waters.  Ch-13: Movements of ocean water.  Waves  Tides  Types of Tides  Ocean current
		Unit – VI Life on the Earth	<ul> <li>Ch-14: Biodiversity and conservation</li> <li>Genetic Diversity</li> <li>Special Diversity</li> <li>Importance of biodiversity</li> </ul>
		Book-3	Ch-5: (Topographic maps) Ch-6: (Introduction to remote sensing.)

## **SUBJECT: POLITICAL SCIENCE**

Month	No. of Working Days	Торіс
April	19	
May	12	
June	14	
July	25	PART – A (INDIAN CONSTITUTION AT WORK) Ch-1: Constitution: Why and How?  (a) Why do we need a constitution?  • Constitution allows coordination and assurance • Specification of decision making power. • Limitation on the power of Gout • Aspiration and Goals of a society • Fundamental identity of a people (b) The authority of a constitution • Mode of promulgation. • The substantive provisions of a constitution. • Balanced institutional design. (c) How was the Indian constitution made? • Composition of the constituent Assembly. • Procedures • Inheritance of Nationalist movement • Institutional arrangements. (d) Provisions adapted from constitution of different countries Ch-2: Rights in the Indian constitution (a) The Importance of Rights • Bills of Rights • Bills of Rights (b) Fundamental rights in the Indian constitution • Right to equality • Right to freedom • Right to freedom • Right to freedom of religion • Cultural and Educational Rights • Right to constitutional Remedies (c) Directive principle of state policy • What do the directive principle contain?

Aug.	20	PART – B (POLITICAL THEORY) Ch-1: Political Theory: An Introduction (a) What is politics? (b) What do we study in Political theory? (c) Putting Political Theory into practice (d) Why do we study political theory? Ch-2: Freedom: (a) The Ideal of freedom. (b) The sources of constraints. Why do we need constraints? (c) The Harm Principle (d) Negative and Positive liberty
Sept.	09	PART – A Ch-3: Election and Representation (a) Election and Democracy (b) Election system in India
Oct.	16	PART – A Ch-4: Executive:  (a) What is an executive?  (b) What are the different types of executives?  (c) Parliamentary executive in India  (d) Power and position of president  (e) Discretionary power of the president  (f) Prime Minister and council of ministers  (g) Permanent executive; Bureareracy  PART – B Ch-4: Social Justice:  (a) What is Justice?  • Equal Treatment for equals  • Proportionate justice  • Recognition of special needs  (b) Just distribution

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		(c) John Rawls Theory of Justice
		(d) Pursuing social Justice
		(e) Free market versus state Intervention.
		Ch-5: Rights: (a) What are Rights
		(b) Where do rights come from?
		(c) Legal rights and the state
		(d) Kinds of rights
		(e) Rights and responsibilities.
		PART – A
		Ch-5: Legislature
		(a) Why do we need parliament
		(b) Why do we need two houses of parliament?
		Rajya Sabha  I J G Ll
		• Lok Sabha (a) What does the Parliament do?
		(c) What does the Parliament do?
		Power of Rajya Sabha     Special review of Rajya Sabha
		Special power of Rajya Sabha  (d) How does the perliament make layer?
		<ul><li>(d) How does the parliament make laws?</li><li>(e) How does the parliament control the executive?</li></ul>
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		(f) What do the committees of Parliament do?
Nov.	19	Ch-6: Judiciary:  (a) Why do we need an Independent Judiciary?
		Independence of Judiciary
		<ul> <li>Appointment of Judges</li> </ul>
		<ul> <li>Appointment of Judges</li> <li>Removal of Judges</li> </ul>
		(b) Structure of Judiciary
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		(d) Judicial Activism
		(f) Judiary and parliament
		PART – B
		Ch-6: Citizenship:
		(a) Introduction
		(b) Equal Rights
		(c) Full and equal membership
Dec.	22	(d) Citizen and Nation
		(e) Universal citizenship
		Ch-7: Nationalism:
		(a) Introducing Nationalism
Dec.	22	<ul> <li>(c) Jurisdiction of Supreme court</li> <li>Original Jurisdiction</li> <li>Writ Jurisdiction</li> <li>Appellate Jurisdiction</li> <li>Advisory Jurisdiction</li> <li>(d) Judicial Activism</li> <li>(e) Judiciary and Rights</li> <li>(f) Judiary and parliament</li> </ul> PART – B <ul> <li>Ch-6: Citizenship:</li> <li>(a) Introduction</li> <li>(b) Equal Rights</li> <li>(c) Full and equal membership</li> <li>(d) Citizen and Nation</li> <li>(e) Universal citizenship</li> <li>(f) Global citizenship</li> <li>Ch-7: Nationalism:</li> </ul>

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		(b) Nation and Nationalism
		Shared Beliefs
		History
		Shared National Identity
		(c) National seej Determination
		(d) Nationalism and Pluralism
Jan.	19	PART – A Ch-7: Federalism:  (a) What is Federalism?  (b) Federalism in the Indian constitution  • Division of power  (c) Federalism with strong central Govt.  (d) Conflicts in India's Federal system  (e) Centre State Relations  (f) Special Provisions  • Jammu and Kashmir  • Demand of Autonomy.  PART – B Ch-8: Secularism:  (a) What is secularism?  • Inter religious domination.  • Intra religious domination  (b) Secular state  (c) The western model of secularism  (d) Critiems of Indian secularism  • Western import  • Minoritism  • Interventionist  • Vote Bank Politics.  PART – A Ch-8: Local Government:  (a) Why local government?  (b) Growth of Local Government in India  • Local Govt. in Independent India  (c) 73 <sup>rd</sup> and 74 <sup>th</sup> amendments  (d) 73 <sup>rd</sup> and remembent  • Three Tier structure  • Election  • Reservation  • Transfer of subjects  • State election commissioners  • State Finance Commission  (e) 74 <sup>th</sup> amendment
		(f) Implementation of 73 <sup>rd</sup> and 74 <sup>th</sup> amendments

Feb.	17	PART – A Ch-9: Constitution as a living document (a) Are constitutions static? (b) How to amend the constitution? (c) Why have there been so many amendments? (d) Contents of amendments made so far? (e) Basic structure and evolution of the constitution (f) Constitution as a living document Ch-10: The Philosophy of the constitution (a) What is meant by philosophy of the constitution? (b) Why do we need to go back to the Constituent Assembly? (c) What is political philosophy of our constitution (d) Procedural Achievements (e) Criticism (f) Limitations.
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## **SUBJECT: PHYSICAL EDUCATION**

MONTH	WD	CHAPTER/TOPIC	CONTENT/ SUB TOPIC IN DETAIL
April	19		
May	12		
June	14		
July	25	Unit: 1 Changing Trends & Career in Physical Education	<ul> <li>⇒ Concept, Aims &amp; Objectives of Physical Education</li> <li>⇒ Changing Trends in Sports –playing surface, wearable gears and sports equipment, technological advancements</li> <li>⇒ Career Options in Physical Education</li> <li>⇒ Khelo-India and Fit-India Program</li> </ul>
Aug.	20	Unit : 2 Olympism	<ul> <li>⇒ Ancient and Modern Olympics</li> <li>⇒ Olympism-Concept and Olympics Values (Excellence, Friendship &amp; Respect)</li> <li>⇒ Olympics-Symbols, Motto, Flag, Oath and Anthem</li> <li>⇒ Olympic Movement Structure-IOC, NOC, IFS, Other members</li> </ul>
		<b>Unit : 3</b> Yoga	<ul> <li>⇒ Meaning &amp; Importance of Yoga</li> <li>⇒ Introduction to Ashtanga Yoga</li> <li>⇒ Introduction to Yogic Kriyas (Shat Karma)</li> </ul>
Sept.	Sept.  O9  Unit: 4 Physical Education & Sports for CWSN (Children with Special Needs- Divyang)		<ul> <li>⇒ Concept of Disability and Disorder</li> <li>⇒ Types of Disability, its causes &amp; nature(Intellectual disability, Physical disability)</li> <li>⇒ Aim &amp; Objective of Adaptive Physical Education</li> <li>⇒ Role of various professionals for children with special needs(Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist &amp; Special Educator)</li> </ul>

Oct.	16	Unit: 5 Physical Fitness, Health and Wellness  Unit: 6 Test, Measurement & Evaluation	<ul> <li>⇒ Meaning and Importance of Wellness, Health and Physical Fitness</li> <li>⇒ Components/Dimensions of Wellness, Health and Physical Fitness</li> <li>⇒ Traditional Sports &amp; Regional Games for Promoting wellness</li> <li>⇒ Concept of Test, Measurement &amp; Evaluation in Physical Education &amp; Sports</li> <li>⇒ Classification of test in Physical Education and Sports</li> <li>i) Concept of Test, measurement &amp; Evaluation in Physical Education &amp; Sports.</li> <li>ii) Classification of Test in Physical Education &amp; Sports.</li> </ul>		
		Lydiddion	iii) Test administration guidelines in Physical Education and Sports.		
Nov.	19	Unit: 7 Fundamentals of Anatomy, Physiology in Sports	⇒ Definition and Importance of Anatomy and Physiology in exercise and sports		
		Unit: 7 Fundamentals of Anatomy,Physiology in Sports	<ul> <li>⇒ Functions of Skeletal system, classification of bone and types of joints</li> <li>⇒ Function and Structure of Circulatory system and heart</li> <li>⇒ Function and Structure of Respiratory system</li> </ul>		
Dec.	22	Unit: 8 Fundamentals of kinesiology and Biomechanics in Sports	<ul> <li>⇒ Definition and Importance of Kinesiology and Biomechanics in sports</li> <li>⇒ Principles of Biomechanics</li> <li>⇒ Types of Body Movements Flexion, Extension, Abduction, Adduction, rotation, Circumduction, Supination &amp; pronation</li> <li>⇒ Axis and Planes-Concept and its application in body Movements</li> </ul>		
		Unit: 9 Psychology & Sports	<ul> <li>⇒ Definition &amp; Importance of Psychology in Physical Education &amp; Sports</li> <li>⇒ Adolescent Problems &amp; Their Management</li> <li>⇒ Team Cohesion and Sports</li> </ul>		
Jan.	19	19 Unit: 10			
Feb.	17	R	Revision for Annual Examination		

#### **SUBJECT: COMPUTER SCIENCE**

Month	No. of Working Days	Chapter Name	Chapters/Topic to be covered
April	19		
May	12		
June	14		
July	25		
Aug	20	Computer Systems and Organisation	<ul> <li>Basic Computer Organisation: Introduction to computer system, hardware device, output device, CPU, memory (primary, cache and secondary), units Byte, KB, MB, GB, TB, PB)</li> <li>Types of software: system software (operating systems, system utilities, programming tools and language translators (assembler, compiler &amp; interpr software</li> <li>Operating system (OS): functions of operating system, OS user interface</li> <li>Number system: Binary, Octal, Decimal and Hexadecimal number system; cobetween number systems.</li> <li>Boolean logic: NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's law circuits • Encoding schemes: ASCII, ISCII and UNICODE (UTF8, UTF32)</li> <li>Familiarization with the basics of Python programming: Introduction to Pyt Python, executing a simple "hello world" program, execution modes: intera script mode, Python character set, Python tokens (keyword, identifier, li punctuator), variables, concept of I-value and r-value, use of comments.</li> </ul>
Sep	09	Unit II: Computational Thinking and Programming – 1	<ul> <li>Introduction to problem solving: Steps for problem solving (analyz Flowcharts, developing an algorithm, coding, testing and debugging). algorithms using flow chart and pseudo code, decomposition.</li> <li>Knowledge of data types: number (integer, floating point, complex), Boolean(string, list, tuple), none, mapping (dictionary), mutable and immutable data t</li> <li>Operators: arithmetic operators, relational operators, logical operators, assigaugmented assignment operators, identity operators(is, is not), membership o in) • Expressions, statement, type conversion &amp; input/output precedence of o expression, evaluation of expression, python statement, type conversion (expl conversion), accepting data as input from the consoland displaying output</li> <li>Errors: syntax errors, logical errors, runtime errors</li> <li>Flow of control: introduction, use of indentation, sequential flow, conditional statements: if, if-else, if-elif-else, simple programs: e.g.: absolutenumbers and divisibility of a number</li> </ul>
Oct	16	Unit II: Computational Thinking and Programming – 1	<ul> <li>Iterative statements: for loop, range function, while loop, flowcharts, break andstatements, nested loops, suggested programs: generating pattern, summation finding the factorial of a positive number etc</li> <li>Strings: introduction, indexing, string operations (concatenation, repetition, memslicing),</li> </ul>

Nov	19	Unit II: Computational Thinking and Programming – 1	<ul> <li>Strings: traversing a string using loops, built-in functions: len(), capitalize(), title( upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha() islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), sp</li> <li>Lists: introduction, indexing, list operations (concatenation, repetition, mem slicing), traversing a list using loops, built-in functions: len(), list(), append(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), maxnested lists, suggested programs: finding the maximum, minimum, mean of nume stored in a list; linear search on list of numbers and counting the frequency of ele list.</li> <li>Tuples: introduction, indexing, tuple operations (concatenation, repetition, mem slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), su assignment, nested tuple, suggested programs: finding the minimum, maximum values stored in a tuple; linear search on a tuple of numbers, counting the fre elements in a tuple.</li> <li>***Half Yearly Examination***</li> </ul>
Dec	22	Unit II: Computational Thinking and Programming – 1	<ul> <li>Dictionary: introduction, accessing itemsin a dictionary using keys, mutability of (adding a new item, modifying an existing item), traversing a dictionary, built-in len(), dict(), keys(), values(), items(), get(), update(), del, clear(), fromkeys(), cop popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested progra the number of times a character appears in a given string using a dictionary dictionary with names of employees, their salary and access them</li> <li>Introduction to Python modules: Importing module using 'import ' and u statement, Importing math module (pi, e,sqrt, ceil, floor, pow, fabs, sin, cos, tan module (random, randint, randrange), statistics module (mean, median, mode)</li> </ul>
Jan	19	Unit III: Society,Law and Ethics	<ul> <li>Digital Footprints</li> <li>Digital society and Netizen: net etiquettes, communication etiquettes, social medi etiquettes • Data protection: Intellectual Property Right (copyright, patent, tradem violation of IPR (plagiarism, copyright infringement, trademark infringement), open software and licensing (Creative Commons, GPL and Apache)</li> <li>Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails,ransom-ware, preventing cyber crime</li> <li>Cyber safety: safely browsing the web, identity protection, confidentiality cyber tr and bullying.</li> <li>Safely accessing web sites: malware, viruses, trojans, adware</li> <li>E-waste management: proper disposal of used electronic gadgets</li> <li>Indian Information Technology Act (IT Act)</li> <li>Technology &amp; Society: Gender and disability issues while teaching and using comp</li> </ul>
Feb	17		Revision for Annual Examination

#### **SUBJECT: MUSIC**

MONTH	W.D	ТОРІС	Period	Half Yearly	Annual	
April	19					
May	12					
		Brief of the following Nada, Shruti, Swar, Saptak, Thaat, Jati, Laya, Tala				
June	14	Brief study of the following :- Margi-Deri, Nibaddha-Anibadta Gan, Raga, Swarmalika.				
July	25	Brief history of the following Drupad, Khayal and Tarana				
	23	Brief study of various Gharanas.				
	20	Brief study of Musical Elements in Natya Shastra dn Brihaddeshi.				
August		Life sketch and contribution of Tanseen, V. N. Bharkhane and V. D. Palushkar.				
		Description of Prescribed Talas along with Tala Notation – Thah, Dugun and Chaugun.				
September	09	Knowledge of the structure of Tanpura.				
September		Revision for Half yearly Examination				
October	16	Write in notation the compositions of prescribed Raag. Bihag, Bhimpalasi,				
November	19	Bhairvi. Knowledge of tanpura				
December	22	One Devotional song one Folk song Tribal song.				
January	19	Revision for Annual Exam.				
February	17	Revision for Annual Exa	m.			

Principal Sign. Incharge Sign. C. Teacher Sign.

Director Sign.

# **RAINBOW PUBLIC SCHOOL**

**AFFILIATED TO C.B.S.E** (+2)

Month-Wise Syllabus for <u>Std:-'XI'</u> (Commerce) (Session: 2025-26)

## **Subject: English**

Month	No. of Working Days	Chapters to be covered	Period	Half Yearly	Annual
April	19				
May	12				
June	14	Hornbill – 1. We're not Afraid to Die. 2. Discovering Tut  Hornbill – 1. The Portrait of a Lady; 2. A Photograph (Poem).  Snapshot– 1. The Summer of the Beautiful WhiteHorse;  Grammar – Tenses (Usage/Gap filling exercise).  Reading – Factual Passages.  Writing – Letter writing.			
July	25	Hornbill – 3. The Laburnum (Poem).  Grammar – Transformation of sentences, Reordering of sentences.  Reading – Discursive passages.  Writing – 1. Speech/Debate  2. Classified Advertisement.			
August	20	Hornbill – 1. The Adventure 2. The Voice of the Rain (poem).  Snapshot – The Address.  Grammar – 1. Error correction, 2. Phrases.  Reading – Summarizing  Writing – Formal letter (Official/Business letters, Letter to Principal/ Editor.			
September	09	Revision for Half Yearly Examination			
October	16	Hornbill – Father to son + Silk Road (Poem).  Grammar – Clauses  Reading – Subtitling  Snapshot – Mothers Day  Writing – Report writing			

November	19	Hornbill – 1. Childhood (Poem) Snapshot – 2. Birth + The tale of Meloncity. Grammar – Exercises on clauses. Reading – Comprehension Writing – Advertisement		
December	22	Hornbill – The Adventure Silk Road  Grammar – Modals  Writing – Writing a CV.		
January	19	Snapshot – The Tale of Melon City (Poem).  Grammar – Editing.  Reading – Note Making  Writing – Speech / Debate.		
February	17	Revision for Annual Examination		

## **Subject: Accountancy**

Month	W.D.	Chapters to be Covered	Period	Half Yearly	Annual
April	19				
May	12				
June	14	Chapter 1:- Introduction to Accounting Topic: - Accounting- Concept, objectives, advantages and limitations, types of accounting information; Users of accounting information and their needs. Function of accounting, accounting process, Qualitative Characteristics of Accounting Information. Role of Accounting in Business. Branch of accounting, book keeping, accounting and accountancy, users of accounting information.  Chapter 2: - Basic Accounting Terms Topic: - Business Transaction, Capital, Drawing, liabilities, Assets, Expenditure, Expense, Income, Profit, Gain, Loss, Purchase, Sales, Goods, Stock, Debtor, Creditor, Voucher, Discount, stock etc.  Chapter 3: - Theory Base of Accounting, accounting standards and Indian accounting standards Topic: -  → Fundamental accounting assumptions GAAP Concept. Business Entity, Money Measurement, Going Concern, Accounting Period, cost concept Dual aspect, Revenue Recognition, Matching, Full Disclosure, Consistency, Conservatism, Materiality and objective.			

		<ul> <li>→ System of Accounting; Basis of Accounting; Cash basis and accrual basis.</li> <li>→ Accounting standards: Applicability in IndAS.</li> <li>→ IFRS and Ind-AS</li> </ul>		
		Chapter 4: - Bases of accounting Topic: - cash basis, accrual basis. Difference between cash basis and accrual basis.		
		Chapter 5: - Accounting Equation Topic: - meaning and effect of accounting equation, process of preparing accounting equation, rules for accounting equation Chapter 6: - Accounting Procedure- Rules of Debit and Credit. Topic:- Meaning of account, rules of debit and credit, classification of account, balancing of account.		
July	25	Chapter 7: - origin of transaction- source documents and preparation of vouchers  Topic: - Voucher and Transaction, Source document and type of vouchers, Preparation of Vouchers		
		Chapter 8: -Journal Topic: - meaning of journal, feature and advantage of journal, limitation of journal, simple and compound entry, discount and rebate, difference between trade and cash discount, opening entry, adjustment entry.		
		Chapter 9: - Ledger Topic: - meaning of ledger, feature and utilities of ledger, format of ledger account, mechanics of posting, balancing of ledger account, trial balance.		
August	20	Chapter 10: - Special purpose book I- cash book Topic: - Meaning of subsidiary book and its classification, advantage of subsidiary book, meaning and feature of cash book, type of cash book (single column and double column), balancing and posting of cash book, petty cash book.		
		Chapter 11: - Special purpose book II- Other book Topic: - Sub division of journal, Purchase book, Sales book, Purchase Return book, Sales Return book, journal proper.		
September	09	Chapter 12: - Accounting for goods and services tax (GST) Topic: - meaning of GST, advantage and feature of GST, categories of GST, intra state supply and interstate supply, levy of GST, what is RCM, accounting entries of GST.		
		Revision for Half Yearly Examination		

October	16	Chapter 13: - Bank Reconciliation Statement Topic: - Meaning of BRS, need and importance of BRS, reasons of difference between cash book and bank statement, presentation of BRS, preparation of BRS.  Chapter 14: - Trial Balance Topic: - meaning feature and objective of trial balance, limitation of trial balance, preparation of trial balance		
November	19	Chapter 15: - Depreciation, Topic: - Depreciation concept, Features, Causes, Factors. Other similar terms:- Depletion and Amortization, Methods of Depreciation.  (i) Straight line Method (SLM) (ii) Written Down Value Method (WDV)  • Difference between SLM and WDV. Advantages of SLM and WDV.  • Accounting treatment of depreciation. (i) Charging to assets account. (ii) Creating provision for depreciation/accumulated depreciation account. (iii) Treatment for disposal of assets.  Chapter 16: - Provisions and Reserve. Topic: - Provisions and Reserve, Difference types of Reserve - (i) Revenue reserve (ii) Capital reserve (iii) General reserve (iv) Specific reserve (v) Secret reserve.  • Difference between capital and revenue reserve. • General reserve and specific reserve • Secret reserve and difference between reserve and provision Chapter 17: - Rectification of Errors Topic: - Errors: Classification of errors. Omission, Commission, principle and compensating, their effect on Trail Balance. One sided error, two sided error Detection and rectification of errors: preparation of suspense account.		
December	22	<ul> <li>Chapter 18: - Financial Accounting – I</li> <li>Financial statement of sole proprietorship</li> <li>Topic: - Financial Statements:</li> <li>Meaning, objectives and importance; Revenue and capital Receipts; Revenue and capital expenditure, Deferred Revenue expenditure.</li> <li>Preparation of Trading and Profit and Loss Account,</li> <li>Preparation of Balance Sheet</li> <li>Calculation of missing value. (COGS, GP etc.)</li> </ul>		

		<ul> <li>Chapter 19: - Adjustment in preparation of financial statements</li> <li>Topic: - Need for adjustments in the final account.</li> <li>Adjustment in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expense, accused income, income received in advance, depreciation bad depts., provision for doubtful debts, provision for discount on debtors, abnormal loss, goods taken for personal use, interest on capital and manages commission.</li> <li>Preparation of Trading and P/L A/C and balance sheet with adjustment.</li> </ul>		
January	19	Chapter 20: - Accounting fromIncomplete Records – single entry system  Topic: - meaning of single entry system, Features, reasons and limitation, advantage and disadvantage of single entry system, Ascertainment of profit/loss by statement of affairs method.  Difference between accounts from incomplete records and statement of affairs.		
February	17	Revision for annual examinati	on	

#### **Subject: Business Studies**

Month	W.D	Chapters to be Covered	Period	Half Yearly	Annual	
April	19					
May	12					
June	14	PART-A: Foundations of Business Chapter 1 Evolution and Fundamentals of Business  History of Trade and Commerce. Business concept. Types of Human Activities. Concept and Characteristics of Business. Multiple objectives of Business. Role of Profit in the Business. Classification of Business Activities. Industry: Meaning and Types Commerce Business Risk				
July	25	<ul> <li>Chapter 2 Forms of Business Organisations:</li> <li>Introduction</li> <li>Forms of Private Sector Enterprises.</li> <li>Co-operative organization.</li> </ul>				

		<ul> <li>Formation of a joint stock company.</li> <li>Important documents used in the formation of a company.</li> <li>Choice of form of Business Enterprise.</li> </ul> Chapter 3 Private, Public and Global Enterprises <ul> <li>Introduction</li> <li>Role of private sector Vs. Public Sector since Independence.</li> <li>Forms/Types of Public Sector Enterprise.</li> <li>Multinational Companies / Global Enterprises</li> <li>Public Private Partnership.</li> </ul>		
August	20	Chapter 4 Business Services:  Meaning Characteristics/Features/Nature of Service Classification or Types of Services Various categories of Business Services Chapter 5 Emerging Modes of Business Introduction Meaning and Scope of E-Business E-Business Vs Traditional Business Outstanding Concept Knowledge Process Outsourcing [KPO]		
September	09	Chapter 6 Social Responsibilities of Business and Business Ethics  Introduction Concept of Social Responsibility Social Responsibility Towards Different Interest Groups. Business and Environment Protection Business Ethics Revision for Half Yearly Examination		
October	16	<ul> <li>Part-B: Finance and Trade</li> <li>Chapter 7 Sources of Business Finance</li> <li>Concepts of Business Finance.</li> <li>Nature and Significance of Business Finance. Sources of finance on the basis of ownership.</li> <li>Sources of Raising Finance</li> <li>Borrowed Fund.</li> <li>Chapter 8 Small Business Enterprises</li> <li>Entrepreneurship Development concept, Characteristics and need.</li> <li>Process of Entrepreneurship</li> <li>Intellectual Property Rights and Entrepreneurship.</li> </ul>		
November	19	<ul> <li>Small Business Introduction</li> <li>Role of Small Business in Rural India.</li> <li>Government Assistance and Special schemes for Industries in Rural.</li> <li>Backward and Hilly Area.</li> <li>Chapter 9 Internal Trade</li> <li>Meaning</li> <li>Main Features of Internal Trade</li> </ul>		

		<ul> <li>Types of Internal Trade</li> <li>Goods and Service Tax (GST) Introduction.</li> </ul>		
December	22	<ul> <li>Chapter 10 International Business</li> <li>Meaning</li> <li>Nature of External Trade/International Business.</li> <li>Problems of International Business.</li> <li>Reasons for International Business.</li> <li>International Business Vs Domestic Business.</li> <li>Benefits of International Business [Need for International Business]</li> <li>Mode of Entering into International Business.</li> </ul>		
January	19	<ul> <li>Export Import Documents.</li> <li>Important terms used in External Trade</li> <li>World Trade Organisation.</li> <li>Revision for Annual Examination</li> </ul>		
February	17	Revision for Annual Examination.		

# **Subject : Economics**

Month	W.D.	Chapter to be covered	Period	Half Yearly	Annual
April	19				
May	12				
June	14	<ul> <li>➤ Micro Economics:</li> <li>Unit – 4: Chapter 1: - Introduction</li> <li>Topic: Meaning of Microeconomics and Macroeconomics, Positive and normative economics, what is an economy? What is scarcity? Control problem of an economy, What, how and far whom to produce; Opportunity Cost, concept of production possibilities frontier and opportunity. Cost.</li> <li>➤ Statistics for economics</li> <li>Unit – 1: Chapter 1: -Economics: an Introduction</li> <li>Topic: What is economics? Definition by several economists. Economic and Non economic activities.</li> <li>Chapter 2: - Meaning scope function and importance of statistics</li> <li>Topic: statistics meaning, feature, function of statistics, importance of statistics and limitation of statistics.</li> </ul>			

July  July  July  Lististics for economics:  Unit 5: Consumer's equilibrium and demand Chapter 2: - Consept of utility, total utility and marginal utility, law of diminishing marginal utility and its assumption, consumer equilibrium in case of one and two commodities, indifference curve/ hicksian analysis, indifference map, assumption of indifference curve and its properties, budget line and budget set and its properties, consumer's equilibrium by indifference curve, cardinal utility vs. ordinal utility.  Chapter 3: - Demand  Topic: - meaning of demand, market demand and individual demand and its determinants, demand function, demand schedule, demand curve, law of demand and its assumption, reason of law of demand, exception of law of demand, movement and shifting of demand curve, substitute goods and complementary goods, normal goods and inferior goods, effect of demand curve, kinds of demand.  Chapter 4: -Elasticity of demand  Topic: - Concept of elasticity of demand, price elasticity of demand, different method for measuring price elasticity of demand, and total expenditure, degrees of elasticity's of demand, factor affecting price elasticity of demand.  Statistics for economics					
August	20	<ul> <li>Statistics for economics</li> <li>Unit 2: - Collection, Organization and Presentation of data.</li> <li>Chapter 3: - Collection of Data</li> <li>Statistical enquiry, Primary and secondary data, Mrthod of collecting primary data, construction of questionnaire or schedule, census and sampling investigation techniques, type of sampling, statistical errors, Source of data-primary &amp; secondary data, How basic data collected with concept of sampling; Method of collecting data; some importance sources of secondary data, censes of India and national sample survey organization.</li> <li>Chapter 04: - Organization of data</li> <li>Topic: - Meaning and methods of classification, concept</li> </ul>			
		of variable, frequency, statistical series, kinds of statistical series (individual, discrete and continuous serious), type of continuous series, bivariate frequency distribution.			
September	09	➤ Statistics for economics Unit 2: - Collection, Organization and Presentation of data. Chapter 5: - Tabular Presentation Topic: - Meaning of tabulation and its objective, requisites of a good table, parts of table, type of table and classification of table, merits of table.	on of		

		Chapter 6: - Diagrammatic Presentation Topic: - introduction of diagrammatic presentation, utility and advantages of diagrammatic presentation, general guidelines for diagrammatic presentation, types of diagram, one dimensional diagrams or bar diagrams, pie diagram, limitation of diagrammatic presentation.  Chapter 7: - Graphic Presentation Topic: - introduction of graphic presentation, advantages of graphic presentation, construction of graphs, type of graphs, frequency distribution graphs, time series graphs (arithmetic line graphs) limitation of graphic presentation.		
		Revision For Half Yearly Examination  Micro Economics:		
October	16	Unit 6: Producer behavior and supply  Chapter 5: - production function Topic: - introduction of production, production function, short run and long run, variable factors and fixed factors, concept of product, return to a factor: law of variable proportions, law of diminishing returns, relationship between TP and MP, relationship between AP and MP.  Statistics for economics Unit 3: - Statistical tools and interpretation. Chapter 8: - Measure of central Tendency- Arithmetic Mean Topic: - meaning objective and function of average, requisites of measure of central tendency, meaning of arithmetic mean, individual, discrete and continuous series, calculation of missing value, combined mean, corrected mean, weighted mean, merits and demerits of arithmetic mean.  Chapter 9: - Measure of central Tendency- median and mode Topic: - introduction of median, properties of median, merits and demerits of median, computation of median general and special cases, quartile computation, introduction of mode, calculation of mode in general and special cases, relationship between mean median and mode, merits and demerits of mode, comparison between mean median and mode.		
November	19	➤ Micro Economics: Unit 6: Producer behavior and supply Chapter 6: - Cost Topic: - meaning of cost, short run cost, average cost, marginal cost, relationship between short run cost curves		

		Chapter 7: - Revenue Topic: - meaning of revenue, concept of revenue, relationship between revenue concepts, relationship between TR and MR, Chapter 8: - Producer's equilibrium		
		Topic: - Introduction of producer' equilibrium, meaning of profit, marginal revenue- marginal cost approach.		
		➤ Micro Economics: Unit 6: Producer behavior and supply Chapter 9: - Supply Topic: - meaning of supply, determinants of individual and market supply, supply function, schedule and curve, law of supply, movement and shift of supply curve, price elasticity of supply and its kinds, methods of measuring price elasticity of supply, time period and supply.		
December	22	Chapter 10: - Main market forms  Topic: - meaning of market, classifying of market structure, perfect competition, perfect competition and pure competition, demand curve under perfect competition.		
		Chapter 11: - Price determination and simple application Topic: - determination of market equilibrium under perfect competition, viable and non-viable industry, change in demand, change of supply, price ceiling, price floor.		
January	19	➤ Statistics for economics Unit 3: - Statistical tools and interpretation. Chapter 11: - Correlation Topic: - correlation importance and its type, degree of correlation, methods of measurements of correlation, karl pearson;s coefficient of correlation, assumption and properties of coefficient of correlation, spearman;s rank correlation, merits and demerits.		
		Chapter 12 Index Number Topic: - meaning of index number, type of index number, methods of constructing price index number, un weighted index number, weighted index number, consumer price index, use and limitation of index number.		
		Revision for Annual Examination		
February	17	Revision for Annual Examination	1	

#### **SUBJECT: PHYSICAL EDUCATION**

MONTH	WD	CHAPTER/TOPIC	CONTENT/ SUB TOPIC IN DETAIL
April	19		
May	12		
June	14		
July	25	Unit: 1 Changing Trends & Career in Physical Education	<ul> <li>⇒ Concept, Aims &amp; Objectives of Physical Education</li> <li>⇒ Changing Trends in Sports –playing surface, wearable gears and sports equipment, technological advancements</li> <li>⇒ Career Options in Physical Education</li> <li>⇒ Khelo-India and Fit-India Program</li> </ul>
Aug.	20	Unit : 2 Olympism	<ul> <li>⇒ Ancient and Modern Olympics</li> <li>⇒ Olympism-Concept and Olympics Values (Excellence, Friendship &amp; Respect)</li> <li>⇒ Olympics-Symbols, Motto, Flag, Oath and Anthem</li> <li>⇒ Olympic Movement Structure-IOC, NOC, IFS, Other members</li> </ul>
		<b>Unit : 3</b> Yoga	<ul> <li>⇒ Meaning &amp; Importance of Yoga</li> <li>⇒ Introduction to Ashtanga Yoga</li> <li>⇒ Introduction to Yogic Kriyas (Shat Karma)</li> </ul>
Sept.	09	Unit: 4 Physical Education & Sports for CWSN (Children with Special Needs- Divyang)	<ul> <li>⇒ Concept of Disability and Disorder</li> <li>⇒ Types of Disability, its causes &amp; nature(Intellectual disability, Physical disability)</li> <li>⇒ Aim &amp; Objective of Adaptive Physical Education</li> <li>⇒ Role of various professionals for children with special needs(Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist &amp; Special Educator)</li> </ul>
Oct.	16	Unit: 5 Physical Fitness, Health and Wellness	<ul> <li>⇒ Meaning and Importance of Wellness, Health and Physical Fitness</li> <li>⇒ Components/Dimensions of Wellness, Health and Physical Fitness</li> <li>⇒ Traditional Sports &amp; Regional Games for Promoting wellness</li> <li>⇒ Concept of Test, Measurement &amp; Evaluation in Physical Education &amp; Sports</li> <li>⇒ Classification of test in Physical Education and Sports</li> </ul>
		Unit: 6 Test, Measurement & Evaluation	<ul> <li>i) Concept of Test, measurement &amp; Evaluation in Physical Education &amp; Sports.</li> <li>ii) Classification of Test in Physical Education &amp; Sports.</li> <li>iii) Test administration guidelines in Physical Education and Sports.</li> </ul>
Nov.	19	Unit: 7 Fundamentals of Anatomy, Physiology in Sports	⇒ Definition and Importance of Anatomy and Physiology in exercise and sports

		Unit: 7 Fundamentals of Anatomy,Physiology in Sports	<ul> <li>⇒ Functions of Skeletal system, classification of bone and types of joints</li> <li>⇒ Function and Structure of Circulatory system and heart</li> <li>⇒ Function and Structure of Respiratory system</li> </ul>	
Dec.	ec. 22	22	Unit: 8 Fundamentals of kinesiology and Biomechanics in Sports	<ul> <li>⇒ Definition and Importance of Kinesiology and Biomechanics in sports</li> <li>⇒ Principles of Biomechanics</li> <li>⇒ Types of Body Movements Flexion, Extension, Abduction, Adduction, rotation, Circumduction, Supination &amp; pronation</li> <li>⇒ Axis and Planes-Concept and its application in body Movements</li> </ul>
		Unit : 9 Psychology & Sports	<ul> <li>⇒ Definition &amp; Importance of Psychology in Physical Education &amp; Sports</li> <li>⇒ Adolescent Problems &amp; Their Management</li> <li>⇒ Team Cohesion and Sports</li> </ul>	
Jan.	19	Unit : 10 Training and Doping in Sports	<ul> <li>⇒ Concept and Principles of Sports Training</li> <li>⇒ Training load : Over Load, Adaptation and Recovery</li> <li>⇒ Concept of Doping and its disadvantages</li> </ul>	
Feb.	17	R	Revision for Annual Examination	

#### **SUBJECT: COMPUTER SCIENCE**

Month	No. of Working Days	Chapter Name	Chapters/Topic to be covered
April	19		
May	12		
June	14		
July	25		

Aug	20	Computer Systems and Organisation	<ul> <li>Basic Computer Organisation: Introduction to computer system, hardware device, output device, CPU, memory (primary, cache and secondary), units Byte, KB, MB, GB, TB, PB)</li> <li>Types of software: system software (operating systems, system utilities, programming tools and language translators (assembler, compiler &amp; interpr software</li> <li>Operating system (OS): functions of operating system, OS user interface</li> <li>Number system: Binary, Octal, Decimal and Hexadecimal number system; cobetween number systems.</li> <li>Boolean logic: NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's law circuits • Encoding schemes: ASCII, ISCII and UNICODE (UTF8, UTF32)</li> <li>Familiarization with the basics of Python programming: Introduction to Pyt Python, executing a simple "hello world" program, execution modes: intera script mode, Python character set, Python tokens (keyword, identifier, li punctuator), variables, concept of l-value and r-value, use of comments.</li> </ul>
Sep	09	Unit II: Computational Thinking and Programming – 1	<ul> <li>Introduction to problem solving: Steps for problem solving (analyz Flowcharts, developing an algorithm, coding, testing and debugging). I algorithms using flow chart and pseudo code, decomposition.</li> <li>Knowledge of data types: number (integer, floating point, complex), Boolean(string, list, tuple), none, mapping (dictionary), mutable and immutable data t</li> <li>Operators: arithmetic operators, relational operators, logical operators, assigaugmented assignment operators, identity operators(is, is not), membership o in) • Expressions, statement, type conversion &amp; input/output precedence of o expression, evaluation of expression, python statement, type conversion (expl conversion), accepting data as input from the console and displaying output</li> <li>Errors: syntax errors, logical errors, runtime errors</li> <li>Flow of control: introduction, use of indentation, sequential flow, conditional statements: if, if-else, if-elif-else, simple programs: e.g.: absolutenumbers and divisibility of a number</li> </ul>
Oct	16	Unit II: Computational Thinking and Programming – 1	<ul> <li>Iterative statements: for loop, range function, while loop, flowcharts, break andstatements, nested loops, suggested programs: generating pattern, summation finding the factorial of a positive number etc</li> <li>Strings: introduction, indexing, string operations (concatenation, repetition, memslicing),</li> </ul>
Nov	19	Unit II: Computational Thinking and Programming – 1	<ul> <li>Strings: traversing a string using loops, built-in functions: len(), capitalize(), title( upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha() islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), sp</li> <li>Lists: introduction, indexing, list operations (concatenation, repetition, mem slicing), traversing a list using loops, built-in functions: len(), list(), append(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), maxnested lists, suggested programs: finding the maximum, minimum, mean of nume stored in a list; linear search on list of numbers and counting the frequency of ele list.</li> <li>Tuples: introduction, indexing, tuple operations (concatenation, repetition, mem slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), su assignment, nested tuple, suggested programs:</li> </ul>

Thinking and Programming – 1  Dec 22  Thinking and Programming – 1  dictionary, built-in len(), dict(), keys(), values(), items(), get(), update(), del, clear(), fromkeys(), cop popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested progra the number of times a character appears in a given string using a dictionary with names of employees, their salary and access them  Introduction to Python modules: Importing module using 'import and u statement, Importing math module (pi, e,sqrt, ceil, floor, pow, fabs, sin, cos, tan module (random, randint, randrange), statistics module (mean, median, mode)  Unit III: Society, Law and Ethics  Digital Footprints Digital Society and Netizen: net etiquettes, communication etiquettes, social medi etiquettes • Data protection: Intellectual Property Right (copyright, patent, tradem violation of IPR (plagiarism, copyright infringement, trademark infringement), open software and licensing (Creative Commons, GPL and Apache)  Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransom-ware, preventing cyber crime  Cyber safety: safely browsing the web, identity protection, confidentialit cyber trand bullying.  Safely accessing web sites: malware, viruses, trojans, adware  E-waste management: proper disposal of used electronic gadgets  Indian Information Technology Act (IT Act)  Technology & Society: Gender and disability issues while teaching and				finding the minimum, maximum values stored in a tuple; linear search on a tuple of numbers, counting the fre elements in a tuple.  ***Half Yearly Examination***
and u statement, Importing math module (pi, e,sqrt, ceil, floor, pow, fabs, sin, cos, tan module (random, randint, randrange), statistics module (mean, median, mode)  Unit III: Society, Law and Ethics  • Digital Footprints • Digital Footprints • Digital society and Netizen: net etiquettes, communication etiquettes, social medi etiquettes • Data protection: Intellectual Property Right (copyright, patent, tradem violation of IPR (plagiarism, copyright infringement, trademark infringement), open software and licensing (Creative Commons, GPL and Apache) • Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransom-ware, preventing cyber crime • Cyber safety: safely browsing the web, identity protection, confidentialit cyber tr and bullying. • Safely accessing web sites: malware, viruses, trojans, adware • E-waste management: proper disposal of used electronic gadgets • Indian Information Technology Act (IT Act) • Technology & Society: Gender and disability issues while teaching and	Dec	22	Computational Thinking and	mutability of (adding a new item, modifying an existing item), traversing a dictionary, built-in len(), dict(), keys(), values(), items(), get(), update(), del, clear(), fromkeys(), cop popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested progra the number of times a character appears in a given string using a dictionary dictionary with
and Ethics  • Digital society and Netizen: net etiquettes, communication etiquettes, social medi etiquettes • Data protection: Intellectual Property Right (copyright, patent, tradem violation of IPR (plagiarism, copyright infringement, trademark infringement), open software and licensing (Creative Commons, GPL and Apache)  • Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails,ransom-ware, preventing cyber crime  • Cyber safety: safely browsing the web, identity protection, confidentialit cyber tr and bullying.  • Safely accessing web sites: malware, viruses, trojans, adware  • E-waste management: proper disposal of used electronic gadgets  • Indian Information Technology Act (IT Act)  • Technology & Society: Gender and disability issues while teaching and				and u statement, Importing math module (pi, e,sqrt, ceil, floor, pow, fabs, sin, cos, tan module (random, randint, randrange), statistics
using comp	Jan	19	_	<ul> <li>Digital society and Netizen: net etiquettes, communication etiquettes, social medi etiquettes • Data protection: Intellectual Property Right (copyright, patent, tradem violation of IPR (plagiarism, copyright infringement, trademark infringement), open software and licensing (Creative Commons, GPL and Apache)</li> <li>Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransom-ware, preventing cyber crime</li> <li>Cyber safety: safely browsing the web, identity protection, confidentiality cyber tr and bullying.</li> <li>Safely accessing web sites: malware, viruses, trojans, adware</li> <li>E-waste management: proper disposal of used electronic gadgets</li> <li>Indian Information Technology Act (IT Act)</li> </ul>

## **SUBJECT: MUSIC**

MONTH	W.D	TOPIC	Period	Half Yearly	Annual
April	19				
May	12				
June	14	Brief of the following Nada, Shruti, Swar, Saptak, Thaat, Jati, Laya, Tala Brief study of the following:- Margi-Deri, Nibaddha-Anibadta Gan, Raga, Swarmalika.			

July	25	Brief history of the following Drupad, Khayal and Tarana		
		Brief study of various Gharanas.		
		Brief study of Musical Elements in Natya Shastra dn Brihaddeshi.		
August	20	Life sketch and contribution of Tanseen, V. N. Bharkhane and V. D. Palushkar.		
		Description of Preseribed Talas along with Tala Notation – Thah, Dugun and Chaugun.		
		Knowledge of the structure of Tanpura.		
September	09	Revision for Half yearly Examination		
0.41		Write in notation the compositions of prescribed Raag.		
October	16	Bihag, Bhimpalasi,		
November	19	Bhairvi. Knowledge of tanpura		
December	22	One Devotional song one Folk song Tribal song.		
January	19	Revision for Annual Exam.		
February	17	Revision for Annual Exam.		

Principal Sign. Incharge Sign. C. Teacher Sign.

Director Sign.

# **RAINBOW PUBLIC SCHOOL**

**AFFILIATED TO C.B.S.E** (+2)

Month-Wise Syllabus for Std:-'XI' (Science) (Session: 2025-26)

## **Subject: English**

Month	No. of Working Days	Chapters to be covered	Period	Half Yearly	Annual
April	19				
May	12				
June	14	Hornbill – 1. We're not Afraid to Die. 2. Discovering Tut  Hornbill – 1. The Portrait of a Lady; 2. A Photograph (Poem).  Snapshot– 1. The Summer of the Beautiful WhiteHorse;  Grammar – Tenses (Usage/Gap filling exercise).  Reading – Factual Passages.  Writing – Letter writing.			
July	25	Hornbill – 3. The Laburnum (Poem). Grammar – Transformation of sentences, Reordering of sentences. Reading – Discursive passages. Writing – 1. Speech/Debate 2. Classified Advertisement.			
August	20	Hornbill – 1. The Adventure 2. The Voice of the Rain (poem).  Snapshot – The Address.  Grammar – 1. Error correction, 2. Phrases.  Reading – Summarizing  Writing – Formal letter (Official/Business letters, Letter to Principal/ Editor.			
September	09	Revision for Half Yearly Examination			
October	16	Hornbill – Father to son + Silk Road (Poem).  Grammar – Clauses  Reading – Subtitling  Snapshot – Mothers Day  Writing – Report writing			

November	19	Hornbill – 1. Childhood (Poem)  Snapshot – 2. Birth + The tale of Meloncity.  Grammar – Exercises on clauses.  Reading – Comprehension  Writing – Advertisement		
December	22	Hornbill – The Adventure Silk Road  Grammar – Modals  Writing – Writing a CV.		
January	19	Snapshot – The Tale of Melon City (Poem).  Grammar – Editing.  Reading – Note Making  Writing – Speech / Debate.		
February	17	Revision for Annual Examination		

# **Subject : Mathematics**

MONTH	WORKING DAYS	CHAPTER/ TOPIC	CONTENT/ SUB TOPIC IN DETAIL	Period	Half Yearly	Annual
APRIL	19	Sets	Sets and their representations. Empty set. Finite and Infinite sets. Equal sets. Subsets. Subsets of a set of real numbers especially intervals (with notations). Universal set. Venn diagrams. Union and Intersection of sets. Difference of sets. Complement of a set. Properties of Complement Sets.			
MAY	12	Relations & Functions	Ordered pairs, Cartesian product of sets. Number of elements in the Cartesian product of two finite sets. Cartesian product of the sets of real with itself (upto RxRxR). Definition of relation, pictorial diagrams, domain, co-domain and range of a relation. Function; Function as a special kind of relation. Pictorial representation of a function, domain, co-domain and range of a function. Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions, with their graphs. Sum, difference, product and quotients of functions.			
JUNE	14	Trigonometric Functions	Positive and negative angles. Measuring angles in radians and in degrees and conversion of one into other. Definition of trigonometric functions with thehelp of unit circle. Truth of the $\sin^2 x + \cos^2 x = 1$ , for all x. Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. Expressing sin (x±y) and cos (x±y) in terms of sinx, siny, cosx & cosy and their simple application. Deducing identities like the following: Identities related to $\sin 2x$ , $\cos 2x$ , $\tan 2x$ , $\sin 3x$ , $\cos 3x$ and $\tan 3x$			

JULY	25	Complex Numbersand Quadratic Equations	Need for complex numbers, especially $\sqrt{-1}$ , to be motivated by inability to solve some of the quadratic equations. Algebraic properties of complex numbers. Argand plane		
AUG.	20	Linear Inequality	Algebraic solutions of linear inequalities in one variable and their representation on the number line.		
SEPT.	09	Limits and Derivatives	Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea of limit. Limits of polynomials and rational functions, trigonometric, exponential and logarithmic functions. Definition of derivative, relate it to slope of tangent of a curve, derivative of sum, difference, product and quotient of functions. The derivative of polynomial and trigonometric functions.		
		Sequence and Series, A.M	Geometric Progression (G.P.), general term of a G.P, sum of n terms of a G.P, infinite G.P. and its sum, geometric mean (G.M.), relation between A.M.and G.M.		
			Revision for Half Yearly Examination		
ост.	16	Permutations and Combinations	Fundamental principle of counting. Factorial n. (n!)Permutations and combinations, derivation of formulae $^{\rm n}P_{\rm r}$ and $^{\rm n}C_{\rm r}$ and their connections, simple applications.		
		Binomial Theorem	Historical perspective, statement and proof of the binomial theorem for positive integral indices. Pascal's triangle. Simpleapplications.		
NOV.	19	Probability	Events; occurrence of events, 'not', 'and'and 'or' events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability, connections with the theories of earlier classes. Probability of an event, probability of 'not', 'and' and 'or' events.		
DEC.	22	Conic Sections Sections of a cone:	Brief recall of two dimensional geometry from earlier classes.  Slope of a line and angle between two lines. Various forms of equations of aline: parallel to axis, point-slope form, slope-intercept form, two point form, intercept form, Distance of a point from a line.  Circles, ellipse, parabola, hyperbola; a point, a straight		
		Introduction to Three– dimensional Geometry	line and a pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle. Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points.		
JAN.	19		Measures of dispersion; Range, mean deviation, variance and standard deviation of ungrouped/grouped data.		
FEB.	17		REVISION FOR ANNUAL EXAM.	_	

# Subject : Biology

Months	W.D.	Chapters	Topics	Period	Half Yearly	Annual
April	19					
May	12					
June	14	The living World	Biodiversity, Need for classification, three domains of life, Taxonomy, Systematics Binomial nomenclature.  Five kingdom classification, Virus, Viroids, Prions Lichens.			
		Biological Classification				
		Plant Kingdom	Salient features of Division- Thallophyta Bryophyta, Pteridophyta, Gymnosperm & Angiosperms Characteristics of Phylum porifera to Chordata.			
July 2	25	Animal Kingdom Anatomy of flowering plants	Tissues, meristematic tissues. Permanent tissues, simple tissues, complex tissues, tissue system. Epidermal tissue system, ground tissue system, vascular tissue system, anatomy of dicotyledonous and monocotyledonous plant, urine formation, regulation of kidney function, RAAS system, counter current mechanisms			
August	20	Structural organization in animals.	Morphology, anatomy and functions of different			
Sept.	09	Cell the Unit of Life Cell Cycle & Cell Division	Cell theory, Str. of cell membrane, structure functions of several cell organelles.  Cell cycle, Mitosis Meiosis and their significance.			
October	16	Biomolecules Photosynthesis in higher plants	Carbohydrates, Protein fats.  Site of photosynthesis pigments, Light reaction (Cyclic & Non Cyclic) Dark Rich (C <sub>3</sub> & C <sub>4</sub> Cycle) Photorespiration.			
Nov.	19	Respiration in Plants  Growth & Development in Plant	Exchange of Gores Glycolysis, Kreb cycle Electron Transport chain Oxidative Phosphorylation Amphibolic Pathway.  Seed Germination phases of Growth Regulators Auxin, Gibberellins Cytokinin and Abscisic Acid Ethylene			

		Breathing and Gares exchange	Respiratory organs in animals, Respiratory system in humans, Mechanism of Breathing, Exchange of Gares Transport of Gares, Regulation of Respiration respiratory Disorders.		
Dec.	22	Body fluid & Circulation	Blood and its components Blood vessels, Human Heart & structure Double circulation, Cardiac cycle ECG, Circulatory disorders.		
		Excretory products and their Elimination	Mode of Excretion, Human excretory system structure function, Urine formation, Regulation of kidney function, RAAS system, Counter current mechanism.		
		Locomotion Movement	Skeletal, Smooth and Cardiac Muscles, Mechanism of muscle contraction, Skeletal system, Joints Disorders of muscular and Skeletal systems.		
Jan.	19	Neural control and Co- ordination	Nervous system in Human central Nervous system peripheral Nervous system, Conduction of Nerve impulses.		
		Chemical Coordination and Integration	Endocrine Glands and Hormones, Human Endocrine system, Mechanism of fast and slow acting hormones, Disorders – Cretinism, Goiter, diabetes Addison's disease Acromegaly etc		
Feb.	17		Revision for annual examination		

## **Subject: Physics**

Month	W.D	Chapters to be Covered	Content in Details	Period	Half Yearly	Annual
April	19					
May	12					
		Chapter 2. Onits	Need for measurement: Units of measurement; syste of units; SI units, fundamental and derived units. significant figures. Dimensions of physical quantitie dimensional analysis and its applications.			
June	14	Unit – II Kinematics Chapter-3: Motion ina straight Line	Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integratifor describing motion, uniform and non- uniform motion, and instantaneous velocity, uniformly accelerated motion, velocity - time and position-timgraphs. Relations for uniformly accelerated motion (graphical treatment).			

July	25	Chapter-4: Motion ina Plane	Scalar and vector quantities; position and displacemvectors, general vectors and their notations; equalityvectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular compo Scalar and Vector product of vectors. Motion in a peases of uniform velocity and uniform acceleration projectile motion, uniform circular motion.		
Aug.	20	Unit – III Laws of Motion Chapter – 5: Laws of Motion	Intuitive concept of force, Inertia, Newton's firstof motion; momentum and Newton's second la motion; impulse; Newton's third law of motion. of conservation of linear momentum and its applications. Equilibrium of concurrent forces, and kinetic friction, laws of friction, rolling friclubrication. Dynamics of uniform circular motioCentripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a baroad).		
	09	Unit – IV Work, Energy and Power Chapter – 6: Work, Energyand Power	Work done by a constant force and a variable force; kinetic energy, work energy theorem, power. Notionpotential energy, potential energy of a spring, conservative forces: non- conservative forces, motioa vertical circle; elastic and inelastic collisions in onand two dimensions.		
Sont		00	Unit – V Motionof System of Particles and Rigid Body	Centre of mass of a two-particle system, mom conservation and Centre of mass motion. Centre of a rigid body; centre of mass of a uniform rod. M of a force, torque, angular momentum, la conservation of angular momentum and its applic.	
Sept.	03	Chapter-7: Systemof Particles and Rotational Motion	Equilibrium of rigid bodies, rigid body rotatio equations of rotational motion, comparison of line rotational motions. Moment of inertia, radius of gy values of moments of inertia for simple geom objects (no derivation).		
		Unit – VI: Gravitation Chapter-8: Gravitation	Kepler's laws of planetary motion, universal l gravitation. Acceleration due to gravity an variation with altitude and depth. Gravita potential energy and gravitational potential, velocity, orbital velocity of a satellite.		

		Unit – VII: Propertiesof Bulk Matter Chapter-9: Mechanical Properties of Solids	Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elast energy.  Revision for Half Yearly Examination		
Oct.	16	Chapter-10: Mechanical Properties of Fluids	Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), eff of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, crit velocity, Bernoulli's theorem and its simple applications. Surface energy and surface tension, an of contact, excess of pressure across a curved surfacapplication of surface tension ideas to drops, bubble and capillary rise.		
Nov.	19	Chapter-11: Thermal Properties ofMatter	Heat, temperature, thermal expansion; thermal expa of solids, liquids and gases, anomalous expansion water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity. Heat transfer-conduction, convection and radiation, therm conductivity, qualitative ideas of Blackbody radiatio Wein's displacement Law, Stefan's law.		
Dec.	22	Unit – VIII: Thermodynamics Chapter-12: Thermodynamics	Thermal equilibrium and definition of temperature zeroth law of thermodynamics, heat, work and inter energy. First law of thermodynamics, Second law thermodynamics: gaseous state of matter, change of condition of gaseous state - isothermal, adiabatic, reversible, irreversible, and cyclic processes.		
Jan.	19	Gases and Kinetic Theory of Gases	Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases - assum concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees o freedom, law of equi-partition of energy (statement and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.		
34		Unit – X: Oscillations and Waves Chapter-14: Oscillations	Periodic motion - time period, frequency, displacem as a function of time, periodic functions and their application. Simple harmonic motion (S.H.M) and iequations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pend derivation of		

			expression for its time period.		
		Chapter-15: Waves	Wave motion: Transverse and longitudinal waves, sp of travelling wave, displacement relation for a progressive wave, principle of superposition of wav reflection of waves, standing waves in strings and pipes, fundamental mode and harmonics, Beats.		
February	17		REVISION FOR ANNUAL EXAM.		

# **Subject : Chemistry**

Month & W.D	Chapters to be covered	Contents in detail	Period	Half Yearly	Annual
April (19)				·	
May (12)					
June (14)	Unit – 1 Some Basic Concepts ofchemistry	<b>General Introduction</b> : Importance and scope of chemistry. Nature of matter, laws of chemical combination, Daltons atomic theory: concept of elements, atoms, and molecules. Atomic and molecular masses.			
		Mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry.			
July (25)	Unit -2 Atomic structure	Discovery of Electron, Proton and Neutron, atomic number, isotopes isobars. Thomson's model and its limitations. Rutherford's model and limitations, Bohr's model and its limitations, concept of shells and subsh dual nature of matter and light, de Broglie's relationship, Heisenb uncertainty principle, concept of orbitals, quantum numbers, shapes of and d orbitals, rules for filling electrons in orbitals - Aufbau princi Pauli's exclusion principle and Hund's rule, electronic configuration atoms, stability of half filled and completely filled orbitals.			
August (20)	Unit 4 CHEMICAL BONDING AND MOLECULAR STRUCTURE	Valence electrons, ionic bond, covalent bond; bond parameters, Le structure, polar character of covalent bond, covalent character of ionic bovalence bond theory, resonance, geometry of covalent molecules, VSE theory, concept of hybridization, involving s,p and d orbitals and shape some simple molecules, molecular orbital theory of homonuclear diato molecules (qualitative idea only), hydrogen bond.			
Sep. (09)	Unit- 7 REDOX REACTIONS	Concept of oxidation and reduction, redox reactions, oxidation num balancing redox reactions, in terms of loss and gain of electrons and chain oxidation number, applications of redox reactions.  Revision for Half Yearly Examination			

Oct. (16)	Unit- 6 CHEMICAL EQUILIBRIUM	Equilibrium in physical and chemical processes, dynamic nature equilibrium, law of mass action, equilibrium constant, factors affec equilibrium - Le Chatelier's principle, ionic equilibrium-ionization of a and bases, strong and weak electrolytes, degree of ionization, ionizatio poly basic acids, acid strength, concept of pH, Henderson Equat hydrolysis of salts (elementary idea), buffer solution, solubility prod common ion effect (with illustrative examples).		
Nov. (19)	Unit -5 THERMODYNAMICS	Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics -internal energy and enthalpy, heat capacity and specific heat, measurement of $\Delta U$ and $\Delta H$ , Hess's law of constant hesummation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction)  Introduction of entropy as a state function, Gibb's energy change for spontaneous and non-spontaneous processes, criteria for equilibrium. Third law of thermodynamics (brief introduction).		
Dec. (22)	Unit -3 PERIODIC CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTY	Significance of classification, brief history of the development of perio table, modern periodic law and the present form of periodic table, peri trends in properties of elements -atomic radii, ionic radii, inert gas r Ionization enthalpy, electron gain enthalpy, electronegativity, vale Nomenclature of elements with atomic number greater than 100.		
Jan. (19)	UNIT -8  Organic Chemistry - Some Basic Principles and Technique  General introduction, methods of purification, qualitative and quantita analysis, classification and IUPAC nomenclature of organic compou Electronic displacements in a covalent bond: inductive effect, electrom effect, resonance and hyper conjugation. Homolytic and heterolytic fis of a covalent bond: free radicals, carbocations, carbanions, electroph and nucleophiles, types of organic reactions.			
Feb. (17)	Unit- 9 HYDROCARBON	Classification of Hydrocarbons Aliphatic Hydrocarbons: Alkanes - Nomenclature, isomerism, conformation (ethane only), phys properties, chemical reactions including free radical mechanism halogenation, combustion and pyrolysis. Alkenes - Nomenclature, structure of double bond (ethene), geometr isomerism, physical properties, methods of preparation, chemical reacti addition of hydrogen, halogen, water, hydrogen halides (Markownik addition and peroxide effect), ozonolysis, oxidation, mechanism electrophilic addition.  Alkynes - Nomenclature, structure of triple bond (ethyne).		

phys properties, methods of preparation, chemical reactions: acidic characte alkynes, addition reaction of -hydrogen, halogens, hydrogen halides water.		
Aromatic Hydrocarbons: Introduction, IUPAC nomenclature, benze resonance, aromaticity, chemical properties: mechanism of electroph substitution. nitration, sulphonation, halogenation, Friedel Craft's alkyla and acylation, directive influence of functional group in monosubstit benzene. Carcinogenicity and toxicity		
Revision for annual examination		

## **SUBJECT: PHYSICAL EDUCATION**

MONTH	WD	CHAPTER/TOPIC	CONTENT/ SUB TOPIC IN DETAIL
April	19		
Мау	12		
June	14		
July	25	Unit: 1 Changing Trends & Career in Physical Education	<ul> <li>⇒ Concept, Aims &amp; Objectives of Physical Education</li> <li>⇒ Changing Trends in Sports –playing surface, wearable gears and sports equipment, technological advancements</li> <li>⇒ Career Options in Physical Education</li> <li>⇒ Khelo-India and Fit-India Program</li> </ul>
Aug.	20	Unit : 2 Olympism	<ul> <li>⇒ Ancient and Modern Olympics</li> <li>⇒ Olympism-Concept and Olympics Values (Excellence, Friendship &amp; Respect)</li> <li>⇒ Olympics-Symbols, Motto, Flag, Oath and Anthem</li> <li>⇒ Olympic Movement Structure-IOC, NOC, IFS, Other members</li> </ul>
		<b>Unit : 3</b> Yoga	<ul> <li>⇒ Meaning &amp; Importance of Yoga</li> <li>⇒ Introduction to Ashtanga Yoga</li> <li>⇒ Introduction to Yogic Kriyas (Shat Karma)</li> </ul>
Sept. 09		Unit: 4 Physical Education & Sports for CWSN (Children with Special Needs- Divyang)	<ul> <li>⇒ Concept of Disability and Disorder</li> <li>⇒ Types of Disability, its causes &amp; nature(Intellectual disability, Physical disability)</li> <li>⇒ Aim &amp; Objective of Adaptive Physical Education</li> <li>⇒ Role of various professionals for children with special. Needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist &amp; Special Educator)</li> </ul>

Oct.	16	Unit: 5 Physical Fitness, Health and Wellness	<ul> <li>⇒ Meaning and Importance of Wellness, Health and Physical Fitness</li> <li>⇒ Components/Dimensions of Wellness, Health and Physical Fitness</li> <li>⇒ Traditional Sports &amp; Regional Games for Promoting wellness</li> <li>⇒ Concept of Test, Measurement &amp; Evaluation in Physical Education &amp; Sports</li> <li>⇒ Classification of test in Physical Education and Sports</li> </ul>
		Unit: 6 Test, Measurement & Evaluation	<ul> <li>i) Concept of Test, measurement &amp; Evaluation in Physical Education &amp; Sports.</li> <li>ii) Classification of Test in Physical Education &amp; Sports.</li> <li>iii) Test administration guidelines in Physical Education and Sports.</li> </ul>
Nov.	19	Unit: 7 Fundamentals of Anatomy, Physiology in Sports	⇒ Definition and Importance of Anatomy and Physiology in exercise and sports
		Unit: 7 Fundamentals of Anatomy,Physiology in Sports	<ul> <li>⇒ Functions of Skeletal system, classification of bone and types of joints</li> <li>⇒ Function and Structure of Circulatory system and heart</li> <li>⇒ Function and Structure of Respiratory system</li> </ul>
Dec.	22	Unit: 8 Fundamentals of kinesiology and Biomechanics in Sports	<ul> <li>⇒ Definition and Importance of Kinesiology and Biomechanics in sports</li> <li>⇒ Principles of Biomechanics</li> <li>⇒ Types of Body Movements Flexion, Extension, Abduction, Adduction, rotation, Circumduction, Supination &amp; pronation</li> <li>⇒ Axis and Planes-Concept and its application in body Movements</li> </ul>
Jan.	19	Unit: 9 Psychology & Sports	<ul> <li>⇒ Definition &amp; Importance of Psychology in Physical Education &amp; Sports</li> <li>⇒ Adolescent Problems &amp; Their Management</li> <li>⇒ Team Cohesion and Sports</li> </ul>
		Unit : 10 Training and Doping in Sports	<ul> <li>⇒ Concept and Principles of Sports Training</li> <li>⇒ Training load : Over Load, Adaptation and Recovery</li> <li>⇒ Concept of Doping and its disadvantages</li> </ul>
Feb.	17	Revision for Annual Examination	

## **SUBJECT: COMPUTER SCIENCE**

Month	No. of Working Days	Chapter Name	Chapters/Topic to be covered
April	19		
May	12		

June	14		
July	25		
Aug	20	Computer Systems and Organisation	<ul> <li>Basic Computer Organisation: Introduction to computer system, hardware device, output device, CPU, memory (primary, cache and secondary), units Byte, KB, MB, GB, TB, PB)</li> <li>Types of software: system software (operating systems, system utilities, programming tools and language translators (assembler, compiler &amp; interpr software</li> <li>Operating system (OS): functions of operating system, OS user interface</li> <li>Number system: Binary, Octal, Decimal and Hexadecimal number system; cobetween number systems.</li> <li>Boolean logic: NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's law circuits • Encoding schemes: ASCII, ISCII and UNICODE (UTF8, UTF32)</li> <li>Familiarization with the basics of Python programming: Introduction to Pyt Python, executing a simple "hello world" program, execution modes: intera script mode, Python character set, Python tokens (keyword, identifier, li punctuator), variables, concept of I-value and r-value, use of comments.</li> </ul>
Sep	09	Unit II: Computational Thinking and Programming – 1	<ul> <li>Introduction to problem solving: Steps for problem solving (analyz Flowcharts, developing an algorithm, coding, testing and debugging). It algorithms using flow chart and pseudo code, decomposition.</li> <li>Knowledge of data types: number (integer, floating point, complex), Boolean(string, list, tuple), none, mapping (dictionary), mutable and immutable data t</li> <li>Operators: arithmetic operators, relational operators, logical operators, assigaugmented assignment operators, identity operators(is, is not), membership o in) • Expressions, statement, type conversion &amp; input/output precedence of o expression, evaluation of expression, python statement, type conversion (expl conversion), accepting data as input from the console and displaying output</li> <li>Errors: syntax errors, logical errors, runtime errors</li> <li>Flow of control: introduction, use of indentation, sequential flow, conditional statements: if, if-else, if-elif-else, simple programs: e.g.: absolutenumbers and divisibility of a number</li> </ul>
Oct	16	Unit II: Computational Thinking and Programming – 1	<ul> <li>Iterative statements: for loop, range function, while loop, flowcharts, break andstatements, nested loops, suggested programs: generating pattern, summation finding the factorial of a positive number etc</li> <li>Strings: introduction, indexing, string operations (concatenation, repetition, memslicing),</li> </ul>
Nov	19	Unit II: Computational Thinking and Programming – 1	<ul> <li>Strings: traversing a string using loops, built-in functions: len(), capitalize(), title( upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha() islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), sp</li> <li>Lists: introduction, indexing, list operations (concatenation, repetition, mem slicing), traversing a list using loops, built-in functions: len(), list(), append(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), maxnested lists, suggested programs: finding the maximum, minimum, mean of nume stored in a list; linear search on list of numbers and counting the frequency of ele list.</li> </ul>

			• Tuples: introduction, indexing, tuple operations (concatenation, repetition, mem slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), su assignment, nested tuple, suggested programs: finding the minimum, maximum values stored in a tuple; linear search on a tuple of numbers, counting the fre elements in a tuple.  ***Half Yearly Examination***
Dec	22	Unit II: Computational Thinking and Programming – 1	<ul> <li>Dictionary: introduction, accessing itemsin a dictionary using keys, mutability of (adding a new item, modifying an existing item), traversing a dictionary, built-in len(), dict(), keys(), values(), items(), get(), update(), del, clear(), fromkeys(), cop popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested progra the number of times a character appears in a given string using a dictionary dictionary with names of employees, their salary and access them</li> <li>Introduction to Python modules: Importing module using 'import' and u statement, Importing math module (pi, e,sqrt, ceil, floor, pow, fabs, sin, cos, tan module (random, randint, randrange), statistics</li> </ul>
Jan	19	Unit III: Society,Law and Ethics	<ul> <li>Digital Footprints</li> <li>Digital society and Netizen: net etiquettes, communication etiquettes, social medi etiquettes • Data protection: Intellectual Property Right (copyright, patent, tradem violation of IPR (plagiarism, copyright infringement, trademark infringement), open software and licensing (Creative Commons, GPL and Apache)</li> <li>Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails,ransom-ware, preventing cyber crime</li> <li>Cyber safety: safely browsing the web, identity protection, confidentiality cyber tr and bullying.</li> <li>Safely accessing web sites: malware, viruses, trojans, adware</li> <li>E-waste management: proper disposal of used electronic gadgets</li> <li>Indian Information Technology Act (IT Act)</li> <li>Technology &amp; Society: Gender and disability issues while teaching and using comp</li> </ul>
	17		Revision for Annual Examination

## SUBJECT: MUSIC

MONTH	W.D	TOPIC	Period	Half Yearly	Annual
April	19				
May	12				
June	14	Brief of the following Nada, Shruti, Swar, Saptak, Thaat, Jati, Laya, Tala Brief study of the following:-			

		Margi-Deri, Nibaddha-Anibadta Gan, Raga, Swarmalika.	
July	25	Brief history of the following Drupad, Khayal and Tarana Brief study of various Gharanas.	
August	20	Brief study of Musical Elements in Natya Shastra dn Brihaddeshi.  Life sketch and contribution of Tanseen, V. N. Bharkhane and V. D. Palushkar.  Description of Preseribed Talas along with Tala Notation  – Thah, Dugun and Chaugun.	
September	09	Knowledge of the structure of Tanpura.  Revision for Half yearly Examination	
October	16	Write in notation the compositions of prescribed Raag.  Bihag, Bhimpalasi,	
November	19	Bhairvi. Knowledge of tanpura	
December	22	One Devotional song one Folk song Tribal song.	
January	19	Revision for Annual Exam.	
February	17	Revision for Annual Exam.	

Principal Sign. Incharge Sign. C. Teacher Sign.

Director Sign.