SUBJECT – ENGLISH CORE

Month	Name of Chapter	Objective/Aim
April	Reading: Comprehension Passage	To enhance comprehension skill
	Writing: Notice	To impart the skill of notifying specific information
	Report Writing	To enhance the skill of critical thinking and presenting ideas in a coherent manner
	The Last Lesson (L-1)	To arouse patriotic feeling and love for mother tongue
	Lost Spring (L-2)	To create awareness about the hazards of child labour
	Mother At Sixty-Six (P-1)	To kindle care and concern for ageing parents
	Third Level (S-1)	To make students aware about the intermingling of present and past, as a way to escape from anxiety and tension.
	Tiger King (S-2)	To point out problems caused by conceit of those in power
May	Reading Comprehension	To enhance comprehension skill
	Writing: Invitation/Replies (Formal)	To develop the skill of extending cordial request to invite, accept or decline the invite
	Writing: Letters to Editor	Skill of corresponding through written communication
	Deep Water (L-3)	To promote 'never say die' spirit
	Journey Towards the End of the Earth (S-3)	To point out the relevance of educational tours to understand global issues.
	The Enemy (S-4)	To promote humanitarian approach and discard enmity
July	Reading Comprehension	To enhance comprehension skill
	Writing: Letters- Job Application	Skill of corresponding through written communication
	Indigo (L-5)	To highlight the role of Gandhi Ji and Champaran episode in Independence movement.
	The Rattrap (L-4)	To understand the value of honesty, kindness, compassion
	Keeping Quiet (P-3)	To highlight the importance of introspection and mutual understanding
August	Reading Comprehension	To enhance comprehension skill
	Writing: Invitation/ Replies (Informal)	To develop the skill of extending cordial request to invite, accept or decline the invite
	Poets and Pancakes (L-6)	To appreciate the struggle of people related to film industry.
	A Thing of Beauty (P-4)	To explore and enjoy the sensual beauty of nature
	The Roadside (P-5)	To draw attention towards the problems of unprivileged people of the society
	On the Face of it (S-6)	To draw attention towards the problems of physically challenged people
September	Reading Comprehension	Revision
	Writing: Speech/Debate	To develop skill of putting forth arguments both in favour or against the topic
	Aunt Jennifer's Tigers(P-6)	To create awareness about problems related to gender discrimination
	The Interview (L-7)	To introduce the concept of Interview in the arena of journalism.
October	Reading Comprehension	Revision
	Writing Skills	Revision
	Going Places (L-8)	To create awareness about the harms of over fantasizing and hero worshipping
November	Reading: Comprehension	Revision

	Writing: Report	Revision
	Writing: Article	To enhance the skill of critical thinking and presenting ideas in a coherent manner
	Letter Writing	Revision
	Memories of Childhood (S-8)	To generate awareness about issues related to caste and creed discrimination
December	Pre-Board I	Complete Syllabus
January	Pre-Board II	Complete Syllabus

Exam Syllabus

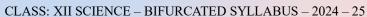| Terminal	Half Yearly	Pre-Board I	Pre-Board II
Reading Comprehension, Notice, Letter to Editor, Report Writing (School Magazine) Literature- The Last Lesson, Lost Spring, My Mother at 66, Keeping Quiet, The Third Level, Tiger King	Reading Comprehension, Notice, Invitation (Formal & Informal) & Replies, Letter to Editor, Job Application. Report Writing (School Magazine & Newspaper) Literature- The Last Lesson, Lost Spring, Deep Water, The Rattrap, Indigo, Poets and Pancake, My Mother at 66, Keeping Quiet, A Thing of Beauty, The Third Level, Tiger King, Journey to the End of the Earth, The Enemy Internal Assessment- ASL & Project	Reading Comprehension, Notice, Invitation (Formal & Informal) & Replies, Letter to Editor, Job Application. Report Writing (School Magazine & Newspaper) Literature- The Last Lesson, Lost Spring, Deep Water, The Rattrap, Indigo, Poets & Pancakes, The Interview, Going Places, My Mother at 66, Keeping Quiet, A Thing of Beauty, Aunt Jennifer's Tigers, A Roadside Stand The Third Level, Tiger King, Journey to the End of the Earth, , On the Face of It, Memories of Childhood	Complete Syllabus

SUBJECT – PHYSICS

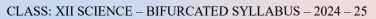| Month	Name of the Chapter	Learning Objectives	Activity/Practical
April	1.Electric charges and Fields 2.Electrostatic Potential and Capacitance	To understand the concept of electric charge and force, Electric fields arising from static charges, Gauss' law and its applications. To learn electric potential arising from a charge and properties of capacitors & how the presence of a dielectric enhances its ability to store electric charge.	Act: 1, 2 Act: 3, 4 Act: 5, 6
May	3.Current Electricity 4.Moving Charges and Magnetism	To understand the basic laws concerning steady electric current and to find current & voltage in electric circuits using Kirchhoff's laws. To understand how magnetic field exerts force on moving charged particles. Biot-Savart & Ampere Circuital Law. MCG	Ex: 1, 2 Ex: 3, 4
July	5.Magnetism and Matter 6.Electromagnetic Induction 7.Alternating Current	To introduce the concept of a bar magnet, its behaviour in external magnetic field and earth's magnetic field. To understand the classification of materials on the basis of their magnetic properties. To study the phenomena associated with changing mag. field & understand the phenomena in which current is generated by varying mag. field which leads to the working of a. c. generator. To understand the concept of alternating currents & then investigate the characteristics of circuit containing resistors, inductors & capacitors. To understand the working of transformer & Power transmission.	Ex: 5, 6
August	8.Electromagnetic Waves 9.Ray Optics and Optical Instruments	To understand the need for displacement current & its consequences. To understand how e. m. waves are produced by changing electric & mag. field. To understand the phenomena of reflection, refraction using the ray picture of light. To study the image formation by spherical reflecting & refracting surfaces. To understand construction & working of optical instruments.	Ex: 7, 8
September	10.Wave Optics	To understand the principle of Huygen for the construction of wave front & apply it for laws of reflection & refraction. To learn the phenomenon of interference & diffraction. Half Yearly Exams	HYE
October	11.Dual Nature of Radiation and matter 12.Atoms 13.Nuclei	To make students familiar with quantum theory, wave – particle nature of matter and photo electric effect. To understand Alpha-particle scattering experiment & its conclusion. To understand Rutherford & Bohr model of the hydrogen atom. To know the nature of the nuclear force, its strength & range. To learn the various properties	Practical Revision & Practice

		of nuclei such as size, mass & stability. fusion & fission To understand the basic concepts of semiconductor physics, devices like junction diodes.	
	14.SemiconductorElectronics:Materials Devices & Simple Circuits		
November	Revision & Pre-Board I		
December	Revision & Pre-Board II		
January	Revision & Board Practical Exam		
February	Board Examination		

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
Ch: 1 to 4	Ch: 1 to 9	Ch: 1 to 14	Ch: 1 to 14

SUBJECT – CHEMISTRY

Month	Name of the chapter	Learning Objectives	Lab Activity
April	Ch-1 Solution Ch-6 Haloalkanes and Haloarene	To state Raoult's law, Henry's law related to solution and their applications in daily life. Colligative properties and Van't Hoff factor. To learn the classification, nomenclature, preparation and properties, stereochemistry of optically active halides.	Salt Analysis (Group 0,1) Mohr Salt Titration
May	Ch-7. Alcohols, Phenols and ethers Ch-8 Aldehydes, Ketones and Carboxylic Acids	To focus on classification, nomenclature, preparation, properties and commercial importance of alcohol, phenols and ethers. To focus on classification, nomenclature, preparation, properties and commercial importance of carbonyl compounds	Salt Analysis(Group 3)
July	Ch2.Electrochemistry Ch-3 Chemical Kinetics Ch-4 d&f-Block Elements	To establish relationship between conductivity and concentration, nernst's equation and its applications to chemical cells. Electrolytic cell and different types of batteries, Mechanism of corrosion and its prevention. To make them understand kinetics of chemical reactions at different chemical atmosphere at all temperature and pressure. Integrated equation for zero and First order reaction. To study the properties of transition elements and inner transition elements.	Oxalic acid titration, Salt Analysis(Group 5)
August	Ch-5 Coordination Compounds	To understand the chemistry of complexes, their IUPAC nomenclature and their applications.	Titration, Salt Analysis(Group 5,6)
September	Revision and Half Yearly Exams		
October	Ch-9 Nitrogen compounds Ch-10 Biomolecules	To focus on classification, nomenclature, preparation, properties and commercial importance of nitrogen compounds To appreciate the importance of carbohydrates, proteins and vitamins and nucleic acid. Differentiate between DNA and RNA.	Titration & Identification of functional groups
November	Revision & Preboard 1		
December	Preboard 2		
January	Revision		

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
Ch. 1, 6, 7	Ch. 1, 2, 3, 4, 6, 7	Complete Syllabus	Complete Syllabus

SUBJECT – BIOLOGY

Month	Name of the Chapter	Objective/Aim	Subject Enrichment Activity
April	Ch-1 Sexual reproduction in flowering plants Ch-2 human reproduction	1. To reinforce the concept of reproduction, it's utility and to explain the various new techniques to develop disease free plants, seedless plant, stress resistance plants. 2. To explain the Human reproduction process in detail.	1. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice). 2. Prepare a temporary mount to observe pollen germination. 3. Pollen germination on stigma through a permanent slide or scanning electron micrograph. 4. T.S. of blastula through permanent slides (Mammalian). 5. Controlled pollination – emasculation, tagging and bagging. 6. Flowers adapted to pollination by different agencies (wind, insects, birds).
May	Ch-3 Reproductive health Ch-4 Heredity and variation	1. To develop the concept of various techniques of reproduction to assist the infertile couple. Students will came to know about reasons for population explosion, reproductive health and STDs.	1. Mendelian inheritance using seeds of different colour/sizes of any plant. 2. Meiosis in onion bud cell or grasshopper testis through permanent slides. 3. Prepare a temporary mount of onion root tip to study mitosis. 4. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc. 5. Models specimen showing symbolic association in root modules of leguminous plants, Cuscuta on host, lichens.
	Complete Assigned Investigatory Project		
July	Ch-5 Molecular basis of inheritance Ch-6 Evolution	1. To create awareness amongst the learners about variations amongst the living and the basis of inheritance of characters and mechanism of physical, chemical and molecular basis of inheritance. 2. To link the present with past. Students will learn about various aspects of evolution with reference to evidence and theories.	1. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness. 2. Flash cards models showing examples of homologous and analogous organs. Submission of investigatory project
August	Ch-7 Human health and disease	1. The students will be enable to enumerate some vectors and the diseases that they cause. They will discuss the causes for	1. Study the plant population density by quadrat method 2. Study the plant population frequency by quadrat method.

	Ch-8 Microbes in Human welfare Ch-9 Principles and process of Biotechnology	the spread of vector-borne diseases. 2. To make students aware about discoveries and innovation in biology to everyday life such as industry, health and agriculture.	3. Common disease-causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause.
September	Ch-9 Continue Ch-10 Application of Biotechnology	To encourage the learning of emerging knowledge and its relevance to latest field of biotechnology.	
	Half Yearly Examination		
October	Ch-11 organism and environment Ch-12 Ecosystem Ch-13 Biodiversity and it's conservation	To promote rational and special attitude issues related to population/Biodiversity/ ecosystem and environment development	Revision of Major experiments
November	Revision and Preboard I Examination		
December	Preboard II Examination		
January	Board Practical Examination		
February	Board Examination		

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
1,2,3,4	1,2,3,4,5,6,7,8	1,2,3,4,5,6,7,8,9,10,11	Full Syllabus

SUBJECT – MATHEMATICS

Month	No. and Name of Chapter	Learning Objective	Enrichment Activities
April	Ch-3: Matrices	Use of matrix in the nature of solutions of systems of simultaneous equations.	
	Ch-4: Determinant	To learn about determinant and their uses in different areas	1.To solve the linear equations using matrix method
	Ch-1: Relations and Function	To understand the different types of relations and functions along with their co-domain and range.	2.To verify that the relation R in the set L of all lines in a plane, defined by R = {(l, m) : l ‖ m} is an equivalence relation. 3.To verify that function is one-one but not onto 4.To verify that function is not one-one but onto
	Ch-2: Inverse Trigonometry Function	To understand the behaviour of inverse trigonometric function which plays very important role in calculus.	
May	Ch-5: Continuity and Differentiability	To clear the concept of continuity and differentiability and their relationship between different types of functions	
	Ch-6: Application of Derivatives	To use derivatives in determining the rate of change of various quantities	5.To understand the concepts of increasing and decreasing functions, 6.To understand the concept of maxima &minima
July	Ch-7: Integration	To solve problems of finding a function whose domain a given	
	Ch-8: Application of Integration	To find the area bounded by the graph of a function under given conditions	7.Calculate the area of the triangle using integration.
August	Ch-8 Application of Integration (CONT…)		
	Ch-9: Differential Equations	To search unknown function that satisfies the equation which contain the derivative of unknown function	
September	Ch-10: Vector Algebra	To study vector, that are helpful in describing and analysing many physical solutions.	
	Revision and Half yearly		
October	Ch-11: Three-Dimensional Geometry	To tell the use of vector algebra in 3D which makes its study simple and elegant.	8. To measure the shortest distance between two skew lines and verify it analytically
	Ch-12: Linear Programming	To determine the optimum values of a linear functions subject to constraints expressed a linear equations or inequalities	9.To solve the Linear Programming Problem graphically.

	Ch-13: Probability	To find the probability of different situations under the given conditions.	10.To explain the computation of conditional probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice
November	Ch-13: Probability (Cont.)		
	Pre-Board I		
December	Revision and Pre-Board II		
January – February	Revision		

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
Ch. 1, 2, 3, 4, 5, 6.	Ch. 1 to 10	Complete Syllabus	Complete Syllabus

SUBJECT – COMPUTER SCIENCE WITH PYTHON

Month	Chapter Name	Objective / Aim	Lab Activity
March - April	Ch – 1 Review of Python Basics	Revision of the basics of Python topics covered in Class XI (Tokens; simple datatypes; notion of a variable; keywords; operators and their precedence, Conditional statements; Notion of iterative computation and control flow; Lists, tuples, and dictionary; Strings	1. Input a string and determine whether it is a palindrome or not; convert the case of characters in a string. 2. Find the largest/smallest number in a list/tuple 3. Input a list of numbers and swap elements at the even location with the elements at the odd location. 4. Input a list/tuple of elements, search for a given element in the list/tuple. 5. Create a dictionary with the roll number, name and marks of n students in a class and display the names of students who have scored marks above 75.
	Ch – 2 Functions	Functions: scope, parameter passing, mutable/immutable properties of data objects, pass arrays to functions, return values, Functions using libraries: mathematical, and string functions, scope of variables, main() function	1. Write a random number generator that generates random numbers between 1 and 6 (simulates a dice) using functions.
May	Ch – 3 Exception Handling in Python Ch – 4 Data File Handling	To make a student understand the concept of Exceptions and how to handle them. Types of errors. File handling: open and close a file, read, write, and append to a file, standard input, output, and error streams, relative and absolute paths, Types of files – Text file, Binary file, CSV file.	1. WAP using try except block to implement exception and it handling. 1. Read a text file and display the number of vowels / consonants/ uppercase/lowercase characters in the file. 2. Create a binary file with name and roll number. Search for a given roll number and display the name, if not found display appropriate message. 3. Create a CSV file by entering user-id and password, read and search the password for given user-id.
July	Ch – 5 Data Structures in Python Ch – 6 Computer Networks	Data-structures: lists, stacks, & various operations associated with it. Structure of a network: Types of networks, cloud and IoT, public vs. private cloud, wired and wireless networks; concept of a client and server; Network devices such as NIC, switch, hub, router, and access points; MAC address, main idea of routing. IP addresses, routing table, router, DNS, and web URLs, TCP; Protocols: 2G, 3G, 4G, Wi-Fi. Basic	1. Write a Python program to implement a stack using list.

		network tools; HTTP (basic idea), working of email, secure communication: encryption and certificates (HTTPS), network applications: remote desktop, remote login, HTTP, FTP, SCP, SSH, POP/IMAP, SMTP, VoIP, NFC	
August	Ch – 7 Relational Database and SQL	Relational databases: idea of a database and the need for it, relations, keys, primary key, foreign key; Use SQL commands to create a table, keys, and foreign keys; insert/delete an entry, delete a table. Basic SQL: select, project, SQL commands: aggregation functions, having, group by, order by, joins.	Create a student table and insert data. Implement the following SQL commands on the student table: 1. ALTER table to add new attributes / modify data type / drop attribute 2. UPDATE table to modify data 3. ORDER By to display data in ascending / descending order 4. DELETE to remove tuple(s) 5. GROUP BY and find the min, max, sum, count and average ● Similar exercise may be framed for other cases.
September	Half Yearly Examination		
October	Ch – 8 Interface Python With SQL	Interface Python with an SQL database, connecting SQL with Python, creating database connectivity applications, perform insert, update & delete queries, display data by using fetchone(), fetchall() & rowcount.	Integrate SQL with Python by importing suitable module.
November	Revision		

Project: The aim of the class project is to create something that is tangible and useful using Python file handling/ Python-SQL connectivity. This should be done in groups of two to three students. The aim here is to find a real-world problem that is worthwhile to solve.

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
Ch – 1, 2, 3, 4	Ch – 1 to 7	Complete Syllabus	Complete Syllabus

SUBJECT – INFORMATICS PRACTICES

Month	Unit Name	Chapter Name	Objective / Aim	Lab Activity
March & April	Unit 1: Data Handling using Pandas and Data Visualization	Data Handling using Pandas -I	Introduction to Python libraries- Pandas, Matplotlib. Data structures in Pandas - Series and data frames. Series: Creation of series from ndarray, dictionary, scalar value; mathematical operations; series attributes, head and tail functions; selection, indexing and slicing. Data Frames: creation of data frames from dictionary of series, list of dictionaries, text/CSV files, display, iteration. Operations on rows and columns: add add (insert /append) , select, delete (drop column and row), rename, Head and Tail functions, indexing using labels, Boolean indexing, joining, merging and concatenation of data frames. Importing/Exporting Data between CSV files and Data Frames. (For practical's only)	1. Create a panda's series from a dictionary of values and a ndarray 2. Given a Series, print all the elements that are above the 75th percentile.
May & July		Data handling using Pandas – II	Descriptive Statistics: max, min, count, sum, mean, median, mode, quartile, Standard deviation, variance. Data Frame operations: Aggregation, group by, Sorting, Deleting and Renaming Index, Pivoting. Handling missing values – dropping and filling. Importing/Exporting Data between MySQL database and Pandas.	3. Create a Data Frame quarterly sales where each row contains the item category, item name, and expenditure. Group the rows by the category and print the total expenditure per category. 4. Create a data frame for examination results and display row labels, column labels data types of each column and the dimensions. 5. Filter out rows based on different criteria such as duplicate rows. 6. Importing and exporting data between pandas and CSV file
		Data Visualization	Purpose of plotting, drawing, and saving of plots using Matplotlib (line plot, bar graph, histogram, pie chart, frequency polygon, box plot and scatter plot).	1. Given the school result data, analyses the performance of the students on different parameters, e.g subject wise or class wise.

				2. For the Data frames created above, analyze, and plot appropriate charts with title and legend. 3. Take data of your interest from an open source (e.g., data.gov.in), aggregate and summarize it. Then plot it using different plotting functions of the Matplotlib library.
August	Unit 4: Societal Impacts	Societal Impacts	Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open-source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act. E-waste: hazards and management. Awareness about health concerns related to the usage of technology.	Explain the impact of technology on society including gender and disability issues.
	Unit 2: Database Query using SQL	Database Query using SQL	Math functions: POWER (), ROUND (), MOD (). Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM (). Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME (). Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and manipulating data using Group by, Having, Order by. Operations on Relations - Union, Intersection, Minus, Cartesian Product, JOIN (Cartesian Join, Equi Join, Natural Join)	1. Create a student table with the student id, name, and marks as attributes where the student id is the primary key. 2. Insert the details of a new student in the above table. 3. Delete the details of a student in the above table. 4. Use the select command to get the details of the students with marks more than 80. 5. Find the min, max, sum, and average of the marks in a student marks table. 6. Find the total number of customers from each country in the table (customer ID, customer Name, country) using group by.

				7. Write a SQL query to order the (student ID, marks) table in descending order of the marks
October & November	Unit 3: Introduction to Computer Networks	Introduction to Computer Networks	Introduction to networks, Types of networks: LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway Network Topologies: Star, Bus, Tree, Mesh. Introduction to Internet, URL, WWW, and its applications- Web, email, Chat, VoIP. Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website. Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies	• Learn terminology related to networking and the internet. • Identify internet security issues and configure browser settings.

Project Work:

The aim of the class project is to create tangible and useful IT applications. The learner may identify a real-world problem by exploring the environment. e.g., Students can visit shops/business places, communities or other organizations in their localities and enquire about the functioning of the organization, and how data are generated, stored, and managed.

The learner can take data stored in csv or database file and analyze using Python libraries and generate appropriate charts to visualize. If an organization is maintaining data offline, then the learner should create a database.

using MySQL and store the data in tables. Data can be imported in Pandas for analysis and visualization.

Learners can use Python libraries of their choice to develop software for their school or any other social good.

Learners should be sensitized to avoid plagiarism and violation of copyright issues while working on projects. Teachers should take necessary measures for this. Any resources (data, image etc.) used in the project must be suitably referenced.

The project can be done individually or in groups of 2 to 3 students. The project should be started by students at least 6 months before the submission deadline.

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
UNIT-I Data Handling using Pandas-I Data Handling using Pandas-II	UNIT-I Data Visualization UNIT-IV Societal Impacts UNIT-II Database Query using SQL	UNIT-I Data Handling using Pandas -I Data Handling using Pandas -II Data Visualization UNIT-IV Societal Impacts UNIT -II Database Query using SQL	Complete Syllabus

SUBJECT – ARTIFICIAL INTELLIGENCE

Month	Unit Name	Learning Outcomes
April	Part A: Unit I: Communication Skills IV	Students will be able to: • Identify the barriers to active listening. • Identify the stages of active listening. • Follow the steps towards removing barriers for active listening. • Demonstrate basic writing skills. • Identify the basic parts of speech, such as nouns, pronouns, adjectives, verbs and adverbs. • Use capitalization and punctuation rules for sentences. • Explain the usage of parts of speech and identify them in a sentence. • Identify supporting parts of speech, such as articles, conjunctions, prepositions and interjections. • Identify the different parts of a sentence. • Differentiate between active and passive voice. • Compose different types of sentences.
May	Part A: Unit II: Self - Management Skills IV	Students will be able to: • Explain the meaning of motivation. • Describe the type of motives. • Differentiate between intrinsic and extrinsic motivation. • Describe the meaning of positive attitude. • Identify the steps for being positive in life. • Identify ways to be result oriented. • Make an action plan. • Explain the meaning of personality. • Describe basic personality traits. • Describe common personality disorders.
	Part B: Unit II: Model Lifecycle	• Different aspects of Model • Train, test, validate, • What are hyper parameters • Commonly used platforms to build and runmodels (Introduction) • Recommended tools • Links to different platforms Watson • Lifecycle of an AI model • Build • Deploy • Retrain
July	Part A: Unit III: ICT Skills IV	Students will be able to: • Explain the importance and usage of spreadsheets, list different spreadsheet applications, open LibreOffice Calc and create a spreadsheet, identify components (parts) of a spreadsheet. • Identify type of data, open a spreadsheet, enter, edit and delete data, select multiple cells, save and close a spreadsheet, print a spreadsheet. • Add values directly in a spreadsheet, add values using formulas, add values using Sum() function, align (arrange) text in a cell, fit text into a cell, highlight the text. • Sort data, add filters, protect spreadsheet with a password. • Describe the advantages of digital presentation, list various presentation software, list features of a presentation, create a new presentation, save a presentation, close a presentation, open a presentation, print presentation slides.

		• Add a slide to a presentation, delete a slide in a presentation, enter and edit text in a presentation, format text in a presentation. • Insert shapes, insert clipart and images, change slide layout. Understanding the problem • Decomposing the problem through DT framework • Analytic Approach • Data Requirements • Data Collection • Modelling approach • How to validate model quality - By test-train split - Introduce concept of cross validation • Metrics of model quality by simple Maths and examples from small datasets – scaled up to capstone project (Apply) - RMSE- Root Mean Squared Error - MSE – Mean Squared Error - MAPE – Mean Absolute Percent Error • Introduction to commonly used algorithms and The science behind them • Showcase through a compelling story
	Part B: Unit I: Capstone Project	
August	**Part A: Unit IV: Entrepreneurial Skills IV** **Part B: Unit III: Story telling through data**	Students will be able to: • Explain the qualities of an entrepreneur. • What is entrepreneurship. • Identify barriers and fears related to becoming an entrepreneur. • Identify the attitudes that make an entrepreneur successful. Students will be able to: • The Need for Storytelling - Information processing and recalling stories - Why is storytelling important? - Structure that story! • How to create stories? - Begin with a pen-paper approach - Dig deeper to identify the sole purpose of your story - Use powerful headings - Design a Road-Map - Conclude with brevity • Ethics of storytelling • Types of Data and Suitable Charts - Text [Wordclouds] - Mixed [Facet Grids] - Numeric [Line Charts/ Bar Charts] - Stocks [Candlestick Charts] - Geographic [Maps] Stories During the Steps of Predictive Modeling - Data Exploration - Feature Visualizing - Model Creation - Model Comparisons Best Practices of Storytelling

September	Revision and Half Yearly Examination	
October	**Part A: Unit V: Green Skills IV**	Students will be able to: • Understand the need of protecting environment • Understand Green jobs and its significance
November	Revision and Pre-Board I	
December	Revision and Pre-Board II	
January	Revision and Practical Examination.	
February	Revision	

Exam Syllabus

Terminal Test	Half Yearly	Pre – Board I	Pre – Board II
Part A: Unit I, II Part B: Unit II	Part A: Unit I, II, III, IV Part B: Unit I, II, III	Complete Syllabus	Complete Syllabus

SUBJECT – PSYCHOLOGY

Month	Name of the Chapter	Objective/ Aim	Lab Activity / Enrichment Activity	Project
April	Ch-1 Variations in Psychological Attributes	After studying this chapter students would be able to: • Develop the understanding of the importance of individual differences in human functioning. • Explain different methods used to assess psychological attributes. • Develop the understanding of how intelligence has different meanings in different cultures.	Intelligence Test	
	Ch-2 Self and Personality	After studying this chapter students would be able to: • Develop the understanding of concept of self and learn ways for self- regulation of behavior. • Learn different methods of Personality assessment. • iii. Develop insight into the development of a healthy personality.	Personality Test	
May	Ch-3 Meeting Life Challenges	After studying this chapter students would be able to: • Develop an understanding of the nature, type, and sources of stress as life challenges. • Learn ways to cope with stress. • Develop the understanding of the factors that promote positive health and well-being.		Development of Case Profile: Using appropriate Methods like Interview, Observation & Psychological Tests.
	Ch- 4 Psychological Disorders	After studying this chapter students would be able to: • Develop the understanding of the basic issues in abnormal behavior and criteria used to identify such behavior. • Explain the different models of abnormal behavior. • iii. Describe the major psychological disorders.		
July	Ch-5 Therapeutic Approaches	After studying this chapter students would be able to: • Familiarize themselves with the basic nature and process of Psychotherapy. • Understand the use of psychological forms of intervention. • iii. Develop the understanding of how people with mental disorders can be rehabilitated.	Self- concept Test	
August	Ch-6 Attitude and Social Cognition	After studying this chapter students would be able to: • Understand what attitudes are, how they are formed and changed.	Interest Test	

		• Analyze how people interpret and explain the behavior of others. • iii. Comprehend the presence of others influences our behavior.		
September	Ch-7 Social Influence and Group Process	After studying this chapter students would be able to: • Develop an understanding of nature and types of groups and know how they are formed. • Examine the influence of groups on individual behavior. • iii. Describe the process of cooperation and competition.	Anxiety Test	
October - February	Revision & Pre – Board Examination			

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
Ch: 1 & 2	Ch: 1 to 4	Complete Syllabus	Complete Syllabus

SUBJECT – COMMERCIAL ART

Month	Name of the Lesson	Learning Objectives
April	**Ch. 1- Rajasthani school of miniature paintings** 1. Origin and development. 2. Sub school of Rajasthani school - i. Mewar ii. Kishangarh. iii. Jodhpur. iv. Jaipur. v. Bikaner. vi. Bundi. 3. Main features or characteristics of Rajasthani miniature paintings. 4. Study of some famous paintings.	The objective of including the history of Rajasthani paintings for the students is to familiarize them with the various styles and modes of art expression from different parts of Rajasthani. This would enrich their vision and enable them to appreciate and aesthetic sensibility to enjoy the beauty of nature and life.
May	**Ch. 2- Pahari school of miniature paintings** 1. Origin and development 2. Sub school of Pahari school of miniature- i. Basohli. ii. Guler. iii. Kangra. iv. Chamba. v. Garhwal 3. Main features or characteristics 4. Study of some famous paintings	The objective of including the history of Pahari paintings for the students is to familiarize them with the various styles and modes of art expression from different parts of Pahari. This would enrich their vision and enable them to appreciate and aesthetic sensibility to enjoy the beauty of nature and life.
July	**Ch. 3- Mughal school of miniature paintings** 1. Origin and development of Mughal school of miniature. 2. Main features or characteristics 3. Study of some famous paintings **Ch. 4- Decani school of miniature paintings** 1. Origin and development of Decani school of miniature.	The objective of including the history of Mughal and Decani paintings for the students is to familiarize them with the various style and modes of art expression from different parts of Mughal. This would enrich their vision and enable them to appreciate and aesthetic sensibility to enjoy the beauty of nature and life.
August	2. Sub school of Decani school - i. Ahmednagar. ii. Golkonda. iii. Bijapur. iv. Hyderabad. v. Berar. 3. Main features or characteristics, 4. Study of some famous paintings. **Ch. 5- Bengal school of paintings** 1. Evolution of Indian national flag	The objective of including the history of Decani and Bengal paintings for the students is to familiarize them with the various style and modes of art expression from different parts of Deccan and Bengal. This would enrich their vision and enable them to appreciate and aesthetic sensibility to enjoy the beauty of nature and life.
September	2. (A) Origin and development of Bengal school of paintings. (B) Main features or characteristics 3. Contribution of Indian artist in the struggle for national freedom movement. 4. Study of some famous paintings	The objective of including the history of Bengal paintings for the students is to familiarize them with the various styles and modes of art expression from different parts of Bengal. This would enrich their vision and enable them to appreciate and aesthetic sensibility to enjoy the beauty of nature and life.
October	**Ch. 6- The modern trends in Indian art** 1. Introduction	This would enable and enrich in students' artistic sense and sensibility towards Indian

2. Study of following works of contemporary (modern) Indian art. 3. 1 – Paintings, 2 - Graphic print, 3 - Sculptures	Modern art Paintings, Graphic print and Sculptures.
November Revision	

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
Rajasthani school of miniature, Pahari school of miniature , Mughl school of miniature	Decani school of miniature paintings, Indian national flag, Bengal school of art.	Whole Syllabus	Whole Syllabus

SUBJECT – HOME SCIENCE

Month	Name of the Chapter	Objective/ Aim	Lab Activity/ Enrichment Activity	Project
April	Ch.1 Work, livelihood, and career. Ch.2 Clinical Nutrition Ch.3 Public Health and Nutrition	• Explain meaningful work, livelihood, careers, and entrepreneurship. • Understand the concepts of standard of living and quality of life. • Understand and describe the significance and scope of clinical nutrition and dietetics. • Describe the role and function of a dietitian/clinical nutritionist/ medical nutrition therapist. • Understand the significance and scope of public nutrition. • Have knowledge about the nutritional problems of public health significance.	Planning of therapeutic meals	
May	Ch.4 Food Processing Ch.5 Food Quality and Food Safety	• understand what food processing and technology is, its history, development and present status. • Explain the significance and basic concepts of the subject. • Explain the importance of various issues related to food safety and quality. • Understand how food-borne illnesses occur	Prepare a PPT on different types of hazards	Project work
July	Ch.6 Early Childhood Care and Education Ch.7 Management of Support Services, Institutions and Programmes for Children, Youth and Elderly	• understand the basic principles of Early Childhood Care and Education (ECCE) as they apply to Indian society. • Understand the importance of early care and learning experiences for children. • Explain why services, institutions and programmes are needed for children, youth, and elderly. • Describe the aspects involved in management of institutions and programmes		
August	Ch. 8 Design for Fabric and Apparel Ch. 9 Fashion Design and Merchandising Ch. 10 Care and Maintenance of Fabric	• Discuss the concepts of design. • Recognise the elements that constitute design. • Describe the fundamentals of fashion. • Discuss the significance of care and maintenance of fabrics and textile products	Flip book on principles/ elements of design	

September	Ch. 11 Hospitality Management	• Explain the importance of hospitality management. • Describe the functioning of housekeeping department.	Flow chart on different functions of housekeeping department	
October	Ch. 12 Consumer Education Ch. 13 Development Communication and Journalism	• Understand the role of Consumer Education and Protection • Understand the importance of development Communication and Journalism for social change and development	Prepare own food label of any product	Survey on different laws for consumers.
November	Pre-Board I			
December	Pre-Board II			
January	Revision			
February	Revision			

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
Ch-1 Work, Livelihood and Career Ch-2 Clinical Nutrition Ch-3 Public Health and Nutrition Ch-4 Food Processing Ch-5 Food Quality and Food Safety Ch-6 Early Childhood Care and Education	Ch-1 Work, Livelihood and Career Ch-2 Clinical Nutrition Ch-3 Public Health and Nutrition Ch-4 Food Processing Ch-5 Food Quality and Food Safety Ch-6 Early Childhood Care and Education Ch-7 Management of Support Services, Institutions and Programmes for Children, Youth and Elderly Ch- 8 Design for Fabric and Apparel Ch-9 Fashion Design and Merchandising Ch- 10 Care and Maintenance of Fabric	Whole Syllabus	Whole Syllabus

SUBJECT – HINDUSTANI MUSIC VOCAL

Month	Name of the Topic	Objective/ Aim	Lab Activity/ Enrichment Activity	Project
April	Raag Bageshree parichay,$ drut khayal, Taal Roopak parichay,$ taal notation thah,dugun,tigun $ chargun Brief Description- Alankar, Meend, Kan, Gram, Murcchna, Life Sketch- Bade Gulam Ali Khan, $ Sangeet Ratnaker.	Basic knowledge of raag bageshree Knowledge of different laykaari through taal roopak on hands Knowledge of basic terms of classical music. Understand the contribution of our legend in classical music.	Practice of Raag & taal in practical class.	
May	Raag Bageshree Vilambit Khayal with Notation $ Alap -Taan. Raag Malkauns parichay $ drut Khayal. jhaptaal parichay Thah, dugun Life Sketch- Faiyaaz Khan. Murkee, Alap -Taan.	To give knowledge of Vilambit laya through vilambit khayal. Basic knowledge of raag malkauns. To give basic knowledge of taal and different laykaari. Understand the contribution of our legend in classical music. To give knowledge of basic terms of classical music.	Practice of Raag & taal in practical class.	Music Practical file.
July	Raag malkauns and raag bageshree drut khyal with alaap taan. Notation of taal roopak & jhaptaal on hands.	Practical knowledge of raag in detail. Recite taal on hands in different laya.	Practice of Drut khyal with alaap taan in practical class.	
August	Raag Malkauns Tarana & drut Khayal with Alap -Taan Taal Jhap taal Tigun & chargun laykari Taal Dhamar parichay & thah, dugun , tigun and chargun laykari. Time theory of raag Sangeet ratnakar khatka Murki , gamak.	Practice of laya through tarana (Madhya to drut laya) To give basic knowledge of taal and different laykaari. Practice of taal in different laya. Explain to decide the time of particular raag. Discuss classical music in ancient times through sangeet ratnakar. To give basic knowledge of alankarik kriya.	Practice of tarana , drut khyal & taal in practical class.	
September	Raag Malkauns drut Khayal with Alap taan, Taal Dhamar Dugun, tigun & chargun taal notation. Life Sketch-Krishan rao Shanker Pandit, Tuning of taan pura.	Practical knowledge of raag in detail. Practice of taal in different laya. Understand the contribution of our legend in classical music. Explain the structure & tuning of taanpura through demonstration.	Demonstration of raag, taal & taanpura.	
October	Raag Bhairav Parichay Dhamar in raag malkauns thah $ dugun.laykari $ Notation.	Basic introduction of raag bhairav. Practice of our ancient singing style Dhamar.	Practice of raag, drut khyal & dhamar in practical class.	
November	Malkauns- Dhamar with laykari.Tarana with Notation.	Practice of raag, taal & tarana in detail.	Practice & demonstration	

			of different raag & taal.	
	Raag Bhairav drut khayal with Alap -Taan. Revision and Pre-Board I			
December	Pre-Board II			
January	Revision			

Exam Syllabus

Terminal	Half Yearly	Pre-Board I	Pre-Board II
Raag Bageshree parichay swar vistar, vilambit & drut khayal notation with Alap taan , raag malkauns parichay, drut khyal notation,Taal Roopak & Jhap taal with layekaree & Taal Notation. topics-Alankar,Meend, Kan, Gram, Murchhna, Sangeet Ratnaker. Murkee, Alap taan, Bade Gulam Ali Khan, & Faiyaaz Khan.	Raag malkuns drut khayal, tarana & dhamar with notation. Raag Bageshree Vilambit & drut khayal notation Taal Roopak, Jhaptaal & dhamar parichay & notation with laykaree. topics- time theory of raag, Sangeet Parijaat, tuning of Taan pura krishan shanker rao pandit,Bade Gulam Ali Khan. Sangeet Ratnakar, Murchhna, gram, Alankar, Meend, Kan,Murkee, Alap taan.	Alankar, kan, Meend, khatka, Murki, Gamak, Alap, Taan, Gram, Murchhna. Sangeet Ratnakar, Sangeet Parizaat. Bade Gulam Ali Khan, Ali Khan, Faiyaaz Khan, Krishan Rao Shanker pandit, Time theory of raag, Tuning of Taan pura, Taal Roopak, Jhap taal, Dhamar parichay notation in laykaree. Raag Bageshree, Malkauns, & Bhairav parichay, swar vistar, raag pehchaan, notation - khayal, dhamar, & tarana.	Alankar, kan, Meend, khatka, Murki, Gamak, Alap, Taan, Gram, Murchhna. Sangeet Ratnakar, Sangeet Parizaat. Bade Gulam Ali Khan, Ali Khan, Faiyaaz Khan, Krishan Rao Shanker pandit, Time theory of raag, Tuning of Taan pura, Taal Roopak, Jhap taal, Dhamar parichay notation in laykaree. Raag Bageshree, Malkauns, & Bhairav parichay, swar vistar, raag pehchaan, notation - khayal, dhamar, & tarana.