TAGORE INTERNATIONAL SCHOOL
VASANT VIHAR, NEW DELHI
SYLLABUS (2021-2022)
CLASS: XII C & D
June- January

JUNE				
Subject	**Topics Covered/ No. of Periods**	**Learning Outcome**	**Activities**	**Assessments**
Mathematics	**Part I** **Continuity & Differentiability**	**Each student will be able to** *differentiate using logarithm * define continuity and differentiability of a function *prove continuity and differentiability of a function *find points of discontinuity	Students will watch the relevant video at home Read NCERT examples at home LAB ACTIVITY: To sketch the graphs of ax and $logax$, $a > 0$, $a \neq 1$ and to examine that they are mirror images of each other	Through small tests in fundamentals Class Work Home work
	Part I **Application of derivatives**	**Each student will be able to** * recall the relation of derivative at a point with the slope of tangent *find the equations of tangent and normal at a given point on a curve *identify a given function to be increasing or decreasing *find the intervals in which a given function is increasing /decreasing	Students will watch the relevant video at home. Read NCERT examples at home LAB ACTIVITY:To understand the concepts of increasing and decreasing functions	Class work Home work Google Forms

			ART INTEGRATION: Create a Madhubani Art style of painting. In the painting identify at least 4 increasing/ decreasing , neither increasing /decreasing , strictly increasing /decreasing functions by highlighting the curves on a cartesian plane. Also, write a short note on Madhubani style of painting	
English	Job Application & Resume	**Each student will be able to** write the job application and the resume correctly.	Tasks on Report Writing (Letter to the Editor revision) Job Application. Worksheet Peer evaluation,question bank by students in groups.	CBSE question answers Google forms Worksheet and assignments
	Rattrap			
	Aunt Jennifer's Tiger	Argue the points in favour of showing empathy to change the character of the peddler, who was a small time.	Short and long questions discussed. Q1. Why was the peddler amused at the idea of the world	
	Mother at sixty-six	Students will be able to understand the concept of supression of the female by themaledominated society.The ill effects of the patriarchal society.	Interview their parents,learn about how they feel about their old and ailing parents.Try and understand about their insecurity and fears.	
	Should Wizard Hit Mommy	Complete the answers related to the		

	(John Updike) Deep Water	concept of old age and separation and loss of a parent. **Each student will be able to**attempt the question about the two perspectives elaborated in the lesson. The perspective of a child and the perspective of an adult.	Peer review to provide clarity to the concept followed by written work. Jam board activity	
	Article Notice	**Each student will be able to** recall the format.	Clarification on form and content through quiz followed by written work.	
Physics	<u>ELECTRICITY (8)</u> ● Conductors and insulators ● Potential difference and emf (1) ● Ohm's Law ● Drift Velocity (1) ● Expression of resistance(1) ● Internal resistance(1) ● Kirchoff's Laws (1) ● Combination of cells (1) ● Wheatstone Bridge (1) ● Metre Bridge (1) ● Potentiometer and its application (2) <u>UNIT 3 (8)</u> · Magnetic Force(1)	● Define current, give its unit, factors affecting the flow of current ● Explain the difference between emf and potential difference. ● Mathematically express resistance of conductors. ● Draw the I V curve of metals insulators and semiconductors. ● Derive the expression for the current. ● List the a factors on which internal resistance depends on ● Solve the given networks to find the value of current, resistances ● Analysis of the heating effects of current. ● Explain the working of a metre bridge and a potentiometer. ● Demonstrate how potentiometer can be used to find the internal resistance of a cell. ● Demonstrate that electric current	Students will watch the relevant video at home Read NCERT examples at home Practical : To determine resistivity of two / three wires by plotting a graph for potential difference versus current. To verify the laws of combination (series) of resistances using a metre bridge. To compare the EMF of two given primary cells using potentiometer. **ART INTEGRATION:** Create a Madhubani Art style of	CBSE question answersClass Class test MCQ in google forms Worksheet and assignments

	· Lorentz Force(1) · Magnetic force on a current carrying conductor (1) · Motion in a magnetic field(1)	gives rise to magnetism. ● · Predict the direction of the magnetic field in any current carrying element ● Calculate the force experienced by a moving charged particle in a crossed electric and magnetic field ● Solve numerical based on Lorentz force. ● State Fleming's rule. ● Explain the working of a velocity selector. ● Sate Biot Savarts law ● Express it mathematically in vector notation ● Apply Biot Savart law to calculate the magnetic field due to different current carrying elements. ● State Ampere's circuital law ● Apply Amperes circuital law to derive the magnetic field due to a long conductor. ● Solve numerical based on conversion of galvanometer into ammeter and voltmeter. ● Explain the working of a galvanometer. ● How can a galvanometer be converted into an ammeter and a voltmeter? ● Justify the use of radial field in a galvanometer	painting to show relation of ohm's law Practical To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.	

| Chemistry | Haloalkanes and haloarenes

●**Classification**
Types and
Methods of preparation
●Phy-chem properties
●SN1 andSN2 mechanism
●Stereochemical aspect of Alkyl halides | **Each student will be able to**
●Follow IUPAC rules of nomenclature of these organic compounds.
●Classify haloalkanes and haloarenes into various categories.
●Enlist at least four methods of preparation of these compounds (two each)
●compare Physical properties of haloalkanes and haloarenes.
●conceptualise o-p substitution of haloarenes
●Visualize the nucleophilic mechanism for sym and chiral compounds
●Understand stereo chemical aspect of alkyl halides | ● **Practicals** – Aim:To separate the coloured components present in a mixture of dyes by ascending paper chromatography and find their R f values.
● Calculate Rf value of dyes from chromatogram
●Calculate concentration/ molarity of KMnO4 solution by titrating it against a standard solution of Oxalic acid
●Outline of methods of preparation of haloalkane and haloarenes, Graphic organizer
●Make a list of different polyhalogen compounds and their uses | ●Class test

(reactions)

●Individual Written work,discussed in pairs and squares |
| | Alcohol,Phenol, Ethers

●nomenclature and methods of preparation
● physical properties
● chemical properties
●mechanism of important reactions
●comparing alcohols and phenols
 ●Ethers
Preparation and properties | **Each student will be able to**
●State rules for nomenclature of these organic compounds.
●Describe methods of preparation of these compounds (at least two)
●Discuss and compare Physical properties of alcohol and phenol
●Explain ring substitution of phenol and ethers
●Predict major products in the reactions of phenol
●Outline industrial method of preparation of ethanol and ,phenol
●Appreciate use of organic compounds in everyday life. | ●graphic organiser - Reaction showing preparation and properties.

●Uses of alcohols and phenol | ●Short test on name reactions given in the chapter
● Google Doc on conversions
●15 mark class test |

	Surface chemistry Adsorption and absorption ●Characteristics of adsorption Will continue in July	 **Each student will be able to:** ●Describe interfacial phenomena and its importance. ●Distinguish between adsorption and absorption.	● **Art integration:**Comic strip on difference between adsorption and absorption	●Question (one word or one line) test
Computer Science	**UNIT 1: Programming and computational thinking** **Ch : User Defined Functions** ● Introduction to User Defined functions ● Functions : scope, parameter passing ● Functions: Mutable / immutable properties of data objects , passing arrays as parameters, returning values	**Each student will be able to** ● use inbuilt functions and modules ● create their own functions and modules ● differentiate between default , keyword and named parameters ● understand and implement the various kinds of parameters in programming ● define the scope of data objects used in a program ● use global keyword and implement it in programming applications too ● Describe the execution of any program containing functions	**Learning Activity** ● Implementation of inbuilt functions using case studies (Assignments will be given to them to work on real life problems) ● implementing mathematical matrices using python programming . **Assessment Activity** ● Solving output questions from worksheets ● Programming questions from worksheets ● Questions (HOTS/Value based) ● Python Program to Take in Two Strings and Display the Larger String without Using Built-in Functions	● Worksheets ● Discussion on online classes ● Outputs provided by the students during online classes

			Program to check whether a number is an Armstrong number or not	
Economics	National Income and Related aggregates. Basic concepts Circular flow of Income derive the formulas Methods of calculating national income Deriving the formulas Aggregates related to national income Real and Nominal GDP POVERTY Meaning Measures of poverty Concept of poverty line Causes of poverty Poverty alleviation program	**Each student will be able to:** Identify the different methods for the measurement of national income Define income method Know expenditure method Classify factor income Analyze the circular flow of income Discover the flow of income in various sectors. Identify the various attributes of poverty. Comprehend the diverse dimensions relating to the concept of poverty. Critically appreciate the way poverty is estimated. Appreciate and be able to assess existing poverty alleviation programs. analyze the current economy scenario in India.	Playing a game may be able to create a spirit of competition and challenge through which learning may be enhanced. Collect articles related to changes in GDP from the newspaper for discussion. Increase in per capita income means increase in per capita availability of goods and services. Does it necessarily mean a rise in the welfare of the people in the country? Give two arguments in support of your answer and explain the same	Worksheets Use of different worksheets on google forms. Peer groups to solve more numerical problems, to discuss tricky questions. Use Economic newspaper, Economic magazines as yojana, to know about the status of national income of a country. Class tests Worksheets Google forms Jam boards

			Newspaper articles on poverty Dramatization	
Psychology	**Ch. 4- Psychological Disorders** ● What is abnormality? ● How to classify disorders? ● How to understand different types of disorders? **Ch.9- Developing Psychological Skills** ● What are psychological skills? ● What skills are used in therapy? ● How to enhance communication skills? ● Where are psychological skills applied?	**Each student will be able to** ● Understand the concept of abnormality and disorders ● Factors underlying disorders ● Major psychological disorders **Each student will be able to** ● Become acquainted with specific skills required to be an effective psychologist ● Understand psychological testing ● Utilize, demonstrate counselling skills briefly	● Case study interactions ● Movie clips ● Presentations ● Assignments ● Group demonstration ● Role play ● Virtual interaction with an expert	● Assignments ● Tests ● Google slides ● Insights ● Art work ● Group Discussion ● Assignments ● Presentation
Biology	**REPRODUCTION IN ANIMALS** (4 Classes) ● The male reproductive	**Each student will be able to-** ● Explain the structure of male & female reproductive system. ● Graphically explain gametogenesis ● Specify the role of hormones in the	● Complete the labels & state one function of each of male & female reproductive gametes.	● Short test based on uterine cycle , embryogenesis & gametogenesis using ● Graphic organizers- chain

	system, female reproductive system, ● gametogenesis, ● menstrual cycle, ● fertilization & implantation, ● pregnancy & embryonic development, ● parturition & lactation	process of gametogenesis. ● List the stages of embryogenesis & developments in uterus after pregnancy & at the time of parturition. ● Relate the changes taking place during various phases of menstruation to changes in the hormones in the female reproductive system. ● Explain the structure of male & female reproductive system. ● Graphically explain gametogenesis ● Specify the role of hormones in the process of gametogenesis. ● List the stages of embryogenesis & developments in uterus after pregnancy & at the time of parturition. ● Relate the changes taking place during various phases of menstruation to changes in the hormones in the female reproductive system.	● Activity sheet based on completing the flow charts. related to Gametogenesis ● Correlate information about ● Hormonal changes in the fetus & the mother during pregnancy. ● **A**IL-Role play on gender **Practical activity-** Study stages of meiosis using permanent slides.	of events ● MCI worksheet
	Reproductive Health 2 classes Problems & strategies, ● Population explosion &	**Each student will be able to-** ● Reason the factors responsible for STD,s ● List the various methods of birth	● Questions on factors promoting STDs in males & females, ● birth control measures & questions related to ART,	● Concept map on Birth control and ART ● Case based questions

	birth control. ● Medical termination of pregnancy, transmission of sexually transmitted diseases. ● Infertility **Principles of Inheritance** **8 classes** ● Mendel's Laws of Inheritance. ● Inheritance of one gene, ● Inheritance of two genes. ● Sex determination ● Mutations and pedigree **Molecular basis of inheritance-** 8 Classes **- (Contd. July)**	control & their functioning ● Specify the method to be used for assisting a couple wanting to give birth to a child. **Each student will be able to-** ● Recall various laws.and relate it to inheritance of traits ● Explain the method used by Mendel in his experiments. ● Interpret the law by studying the ratios of F_2 generation. Determine analogy between gene inheritance & chromosomal behaviour. Explain the relationship of linkage & crossing over. Analyze human genetic disorders using pedigree. ● Describe the process of sex determination & ● Write differences as well as symptoms of Mendelian & chromosomal disorders **Each student will be able to-**	● Design a brochure/flyer related to reproductive health **Subject Integration**-Chemical derivatives-contraceptive Pills ● Students will solve questions given in the activity sheet related to Mendel's crosses, ● Deviation from Mendel's & Pedigree. ● List 15 vocabulary words from the topic **Experiential learning :** **Pedigree charts for assessing genetic disorders in humans** **memory matrix** ● Students will make flow charts of the processes learnt for expression of genetic material. Involving	Google form with MCQ questions Questions on the concept of Linkage and crossing over. Questions from NCERT as home work. Questions based on pedigree. Google form for MCQ's

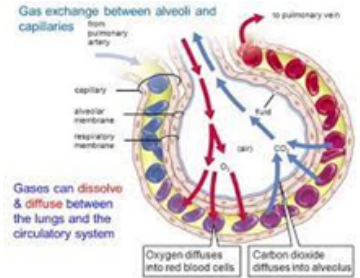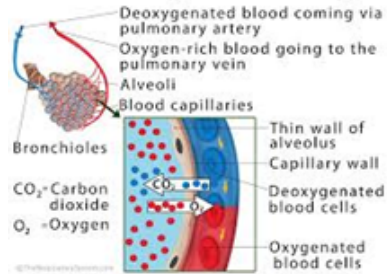|			● RNA expression & protein synthesis- **AIL**- Cartoon Strip on the topic	Worksheet having questions on DNA structure , protein synthesis,operon and DNA fingerprinting.
	● DNA structure, search for genetic material ● RNA world, replication ● transcription, translation, genetic code, regulation gene expression, ● human genome project, DNA fingerprinting	● Identify DNA as the genetic material giving its features. ● Describe the structure of molecules making DNA. ● Recall the experiment for establishing DNA as the genetic material. know the properties of genetic code, ● Explains the process of gene expression , translation & translation along with illustrations ● Infers the base assignment of RNA from the base assignment of DNA know the components of operon for understanding regulation of gene expression		

JULY

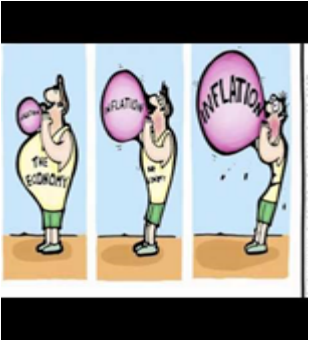| Subject	Topics Covered/ No. of Periods	Learning Outcome	Activities	Assessments
Mathematics	**Part I** **Application of derivatives**	**Each student will be able to** *calculate the point of max/min in a given interval *differentiate btw absolute max/min and local max/min *apply the theory of max/min to solve word problems	LAB ACTIVITY: 1) To understand the concepts of max and min values of a function in a closed interval through 2) To understand the concepts of local maxima, local minima and point of inflection.	Through small tests in fundamentals Class work Homework from NCERT (To be uploaded on Google classroom

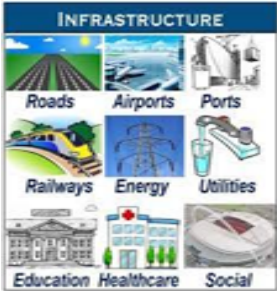|			3) To construct an open box of maximum volume from a given rectangular sheet by cutting equal squares from each corner	
	Part II **Integrals**	**Each student will be able to** *define the concept of antiderivative *learn the integral of basic functions by the method of inspection *integrate by substitution *apply the method of substitution to solve problems of integration by using trigonometric identities *integrate some particular functions *apply the method of by parts to integrate	Make a comparison between differentiation and integration using Canva.	Homework from NCERT (To be uploaded on Google classroom Oral questioning Quiz Short Class tests
English	Article (revision)	**Each student will be able to** Recall the format and attempt the questions correctly.	Students will be instructed to read articles in newspapers and magazines and share their inputs in class. Students will then write articles with the correct format.	Worksheet Assignments Quiz CBSE questions
	Advertisements-Classified	**Each student will be able to** Recall the format and attempt the questions correctly.	Students will collect different advertisements from the newspaper and share it in the class.Discuss the format and learn how to write the classified advertisements.	
	On the Face of it(Susan Hill)	Students will be able to correctly answer the question of being optimistic even in		

	Keeping Quiet	the face of adverse circumstances in life. Students will be able to correctly answer the reference to the context questions and the short answer and long answer type questions.	Collaborative learning/Role Play: Two students will pair up and each will take up the role of Jerry or Mr Lamb Analyse. Why do the two characters in the lesson face humiliation? Why human beings cannot live by the motto 'live and let live'	
	Indigo	Detailed discussion along with a PPT.	Each child will be instructed to connect the situation Covid 19 to the theme of self- healing of Nature without human intervention. The importance of reflection.	
	Invitation and Replies	PPT on the format and content.	Students instructed to do a close reading on the chapter. Students will be instructed on how to formulate an invitation and its reply.	
Physics	UNIT 4 **Electromagnetic Induction (5)** · Faradays laws (1) · Lenz's law(1) · Self Induction (1) · Mutual Induction (2) · Eddy currents (1)	State faradays laws of electromagnetic induction · State lenz's law · Define self inductance · Define mutual inductance · State application of eddy currents	Practical : To find the frequency of AC mains with a sonometer. To verify the laws of combination (series) of resistances using a metre bridge. **ART INTEGRATION:**	CBSE question answersClass Class test MCQ in google forms Worksheet and assignments

			Create a Mandala Art style of painting to show mutual induction	
Chemistry	**Surface chem** ●Classification of colloids ●Coagulation ●Peptisation ●Colloids Motion of colloidal particles ●Cleansing action of soap	**Student will be able to:** ● Characterize physisorption and chemisorption. ● Define :catalysis, activity ,selectivity, colloids. ● Distinguish between solutions, colloids, and suspensions ● Classify colloids into lyophilic and lyophobic. ● List at least three properties of colloids and their applications ● Demonstrate an experiment to show Tyndall effect ● Compare Action of soap and detergent in foaming	●**Practical:** Find out the concentration of $KMnO_4$ by using Ferrous Ammonium Sulphate. Write result in practical file. ●Graphic organizer-properties of colloids ●Look around you for colloidal solution ●**Research** : Alveoli in lungs are the gateway through which oxygen enters our bloodstream and the primary way in which some of the waste products of metabolism (carbon dioxide) exit the body. How does the surface area of these alveoli impact the exchange of gases.	●Concept mapping with Keywords ●previous years board questions ●Assignment (numericals, reasoning questions) ●Assessment of Numericals and derivations done Google doc ●Google form(MCQ) ●Class test Google doc (concept and numerical)
	Solution ●Types of solutions and Expressing concentration ●Solubility ●Henry's law ●Raoult's law ●Colligative properties ●Deviations From ideality	**Student will be able to:** ●Classify solutions into various types on the basis of state of solute and solvent.. ●Express concentration of solution in different units. ●State and explain Henry's and Raoult's law. ●Distinguish between ideal and nonideal solution. ●Describe and derive colligative properties as function of no.of solute particles.	 ●Integration with bio	

	Chemical Kinetics ●Introduction and expression for rate of reaction. ●Rate constant and rate laws ●Factors affecting rate of reaction ●Concentration Temperature Catalyst ●Zero and first order reaction ●Collision theory (definition and significance	●Enlist factors causing deviation from ideality. **Student will be able to:** ●Derive the rate law for zero, first and second order reactions ●Draw the graph rate—concentration and interpret order of the reaction. ●Establish the relation between rate constant and half life ●Distinguish between order and molecularity ●describe collision theory	Function of lung and oxygen gradient **Gas Exchange in the Lungs** ●Interpretation of graph for order of reaction(integration with math) ●Rate of different reactions in human body	
Computer Science	**UNIT 1: Programming and computational thinking** **Ch : Python Modules and Libraries** ● Introduction to modules and libraries ● String Module ● Math module ● Random Module ● Statistics Module ● Programs based on	**Students will be able to**: ● use python libraries and modules in program codes ● Differentiate between library and module ● Implement math and stats methods to solve real time problems ● Create Python packages and Libraries	**Learning Activity** ● Using Random module to randomly select ten students from the given list, for admission in a school ● Implement predefined string functions to manipulate strings.	● Assignments ● Test sheets ● Class Discussion

	modules and libraries ● Output Questions based on Python modules ● Functions using string math, random and statistics modules **Data Structures:** ● Lists ● Stacks : introduction ● Stack implementation ● Stacks as utility	**Students will be able to:** ● Distinguish between stacks and queues, LIFO and FIFO ● implement stacks and queues using linked lists ● design linked list based programs for stacks	**Learning Activity** ● Write algorithms for linked list based programs for stacks **Experiential Learning Activity** ● Make stack based programs on computer using Python IDLE software ● Test programs with dummy data and Compile the outputs	
Economics	Determination of Income and employment. Component of Aggregate Demand Consumption Function Savings Functions Determination of Equilibrium. Multiplier Excess Demand Deficient demand Monetary Policy	**Each student will be able to:** Identify the concept of Aggregate demand and state its components. Derive the consumption and savings from Income Y=C+S Determine the short run fixed price in product market equilibrium, output, investment. Multiplier and its working Deficient demand and Excess demand Measures	Discussion on how The sub-prime crisis in the United States of America led to economic repercussions in the everyday lives of not only Americans but also in India	Class Test MCQs Worksheet Assignment Quiz

	Infrastructure Meaning Types Economic Vs Social Problems State of infrastructure in India.	to combat the changes in equilibrium and output. Be aware of various Challenges of the Indian economy. To enable the students to understand the concept and strategies of current Challenges facing Indian economy. To get them important knowledge about the issues relating to current Challenges facing Indian economy. To be able to analyze the current economy scenario in India.	 Discuss the importance of medical facilities in the country for HCF as well as earning income DEBATE AND DISCUSSION Example How does Infrastructure help in the development of Indian economy? A parliamentary debate in the light of the current scenario. Some value based questions and PISA based questions related to current Challenges facing Indian economy given to students. Design a FLIER by using any	Class Test MCQs Worksheet Assignment Quiz

			traditional art design as borders showing infrastructure. 	
Psychology	**Ch.3-Meeting Life's Challenges** ● What is stress? ● What are the different types of stress? ● How to cope with stressors? **Ch.5-Therapeutic Approaches** ● What are therapeutic approaches? ● What are the different type of therapeutic approaches? ● How are therapies applied and practiced?	**Each student will be able to**: ● Understand the nature, type and sources of stress ● Effects of stress on health ● Coping mechanisms of stress ● Promoting positive health and well-being **Each student will be able to** ● Understand the nature and process of psychotherapy ● Conceptualise an understanding of types of therapies ● Understand the process of rehabilitation	● Assignments ● Google classroom discussions and jamboards ● Art work ● Virtual field visit/ interaction with rehab centre ● Case study discussion ● Case excerpts ● Presentation ● Assignments	● Assignments ● Tests ● Art illustration ● Role play ● Assignments ● Tests ● Google slides ● Insights
Biology	**Human Health and Drugs**	**Each student will be able to**	Students will make the	● Google docs with

	(6 Classes)	● Correlates symptoms with the type of the disease.	concept map on immunity.	Questions based on causative organism & symptoms of common human diseases
	● Common human diseases, ● Immunity ● AIDS, Cancer, ● Drugs & alcohol abuse	● Explains the nature of the immune systems. ● Classify the types of immune systems. ● List the causes of cancer & its symptoms & treatment ● Draw the life cycle of HIV as it infects humans	● Students will make flow charts on different aspects of AIDs & Cancer ● CLASS Quiz on drugs made by the students using Flippity.net **Lab activity** Observing specimens of Plasmodium Ascaris, Entamoeba, Ring worm Assessment of second draft of CBSE Projects. Experiential learning-Why are people given Two shots of vaccine for COVID-19? Justify with scientific reasons.	● immunity & its types ● structure of antibody molecule, ● Worksheet having exemplar questions. ● Google form for MCQs

<div align="center">

AUGUST

</div>

Subject	Topics Covered/ No. of Periods	Learning Outcome	Activities	Assessments
Math	**Part II** **Integrals**	**Each student will be able to** *apply the method of partial fractions to	Quiz on formulae related to integration	Class work Homework from NCERT(To

		integrate *make sense out of the concept of definite integral of a function *evaluate definite integral using fundamental theorem of calculus *apply the properties of definite integrals in solving questions.		be uploaded on Google classroom) Google Form
	Part I **Relation & Functions**	**Each student will be able to** * state the types of relations ; reflexive , symmetry , transitive and equivalence and define them * solve questions based on the types of relations *state the types of functions : one-one(injective) , onto(surjective) * solve questions based on the types of functions.	LAB ACTIVITY: 1)To verify that the relation R in the set L of all lines in a plane , defined by R = { (l,m) : l ll m } is an equivalence relation. 2) To demonstrate a function which is not one-one but is onto	Homework from NCERT (To be uploaded on Google classroom) https://diksha.gov.in/play/cont ent/do_31308876685309542 41214(MCQ's) Class Work Homework from NCERT (To be uploaded on Google classroom)
	Part I **Linear Programming**	**Each student will be able to** * get familiarised with terms objective function, linear constraints, non – negative constraints * describe a linear programming problem as a one that is concerned with finding the optimal value (maximum or minimum) of a objective function of several variables that are non – negative and satisfy a set of linear		Google Form Homework from NCERT (To be uploaded on Google classroom) Google Form https://diksha.gov.in/play/c ontent/do_31309425016164 352011711

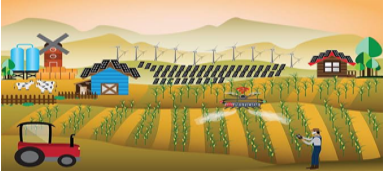|				

		constraints
		* solve graphically the linear
		  programming problems by corner point
		  method by identifying feasible region
		  (bounded), corner points and thus
		  finding the optimal feasible solution
			Quiz to test on standard
			equations of conic sections
			
			Experiential Activity : To find the
			area of a leaf	

	Part II
	Application of integrals
		Each student will be able to
		*recall the concept of definite integrals
		*sketch the various standard curves
		*calculate the area under simple
		  curves,area of the region bounded by a
		  curve and a line
			Experiential Activity: To observe
			the types of curves formed when
			a bucket of still water is
			disturbed by throwing a coin in it	

	Part II
	Differential Equations
		Each student will be able to
		* identify an equation involving
		  derivatives of the dependent variable
		  with respect to independent variable as
		  a differential equation
		* distinguish between order and degree
		  of any differential equation and state
		  the order and degree(if any)
		* solve a differential equation and find its
		general solution and also particular
		solution
		* apply variable separable method to
		  solve an equation in which variables
		  can be separated completely
		* identify and solve a differential
		  equation that can be expressed in the
		  form dy/dx = f(x,y) or dx/dy = g(x,y) as
		  homogeneous differential equation
			Quiz on degree and order of a
			differential equation
			
			Art Integrated Learning:Find a
			pattern of family of curves in a
			picture of S H Raza and also
			sketch it	

English	Evans tries O Level	Each student will be able to write the questions correctly.	Students will be instructed to do a role play -Evans writing his exam and the exchange of personalities, the exchange of disguise (Art Integration) Visit to a prison(Experiential Learning)	Worksheet Assignments Quiz Oral discussion CBSE questions
	Speech and Debate	**Each student will be able to** understand and write the format correctly.	PPT on format and content to be shown to the students the difference in approach when formulating a debate and a speech.	Worksheet Assignments Quiz
	A Thing of Beauty	**Each student will be able to** understand and write the analysis correctly.	Students will be shown a PPT.Discussion on the Romantic Era and the great poets. Their works and its significance. Line by line explanation of the poem	Oral discussion CBSE questions
	The Enemy	**Each student will be able to** understand and write the answers correctly.	Video on World War I&II Analysis of the characters and theme.Discussion.	
	An Elementary School	**Each student will be able to** understand the central theme, poetic devices in the	Line by line explanation of the	

		Classroom in a Slum	poem.	poem. Buzz session.	
Physics		**Ac and Dc current** **Alternating current (9)** · Ac and Dc current (1) · Average and rms values of current and voltage (1) · Power (1) · Power factor (1) · Impedance triangle (1) · Quality factor (1) · Phasor Diagrams(2) · Transformers (1**)**	· Differentiate between the alternating and direct current · draw phasor diagrams of various circuits · Calculate impedance of an LC, RC and RLC circuit · Ac generator and transformer · Describe transient current, electric oscillatons, electrical resonance · Analyse graphs to predict the circuits with better quality factor · Explain the construction of a transformer.	Practical : To find the frequency of AC mains with a sonometer. To verify the laws of combination (series) of resistances using a metre bridge. ART INTEGRATION: Create a Mandala Art style of painting to show mutual induction	CBSE question answersClass Class test MCQ in google forms Worksheet and assignments
		E.M WAVES (3) · Displacement current · Electromagnetic waves · Electromagnetic Spectrum	· Understand light is an emw · Concept of displacement current · Modified ampere's circuital law · Hertz experiment · EM waves include radio waves, x-rays Gamma rays, IR rays, UV rays · Propagation of EMWaves in atmosphere		
Chemistry		**P-block elements** ●(Group-15,16) electronic configuration,IE.metallic Nature Oxidation	**Each student will be able to:** ●Reason for variation in physical properties of p-block elements.	●**Practical**: Identify the functional group present in a given organic compound.	●Trend in groups and periods class test(open book) ●Google form

	States ,Mp/bp ●Group-17 electronic configuration IE.metallic nature Oxidation states M.pt. /b.pt. ●Group-18 electronic configuration IE.metallic Nature Oxidation States M.pt. /b.pt.	●Outline the steps of method of preparation of HNO_3,NH_3 and H_2SO_4 of Sulphur ●Draw structures of hydrides,oxides and oxoacids ●Mention reactions and uses of important compounds of sulphur. ●Characterize important compounds of halides ●Draw structures of oxides,fluorides and oxofluorides of Xenon ●Predict if hydrolysis reactions of xenon fluoride are redox or not ●State at least two uses of noble gases.	●Research: Different methods of preparation of medicinal oxygen. ●Art integration- 1. periodic table song 2.Role play –properties of elements 3. make a list of uses of inner transition elements Discussion and Presentation by students ● Practicals - Aim: To identify the cation and anion present in the given salt sample. ● Explain practical, chemical reactions. https://www.olabs.edu.in/	●Assessment Google doc
	Aldehydes, Ketones, Carboxylic acids ●IUPAC naming ●Methods of preparation ●Physical and chemical properties ●Nucleophilic addition reactions ●Condensation reactions Reduction reactions ●Carboxylic acids Naming	**Each student will be able to:** ●Follow IUPAC rules and name compounds. ●Correlate physical and chemical properties of these classes of compounds. ●Describe methods of preparation of these compounds (at least two) ●Illustrate important name reactions with examples. ●Draw resonating structures of benzaldehyde ●Explain ring substitution . ●Compare nucleophilic addition reaction of aldehyde with ketones	●Poster on relative reactivity of aldehydes and ketones ●Research: The Chemistry of EssentialOil	●Reasoning qs (MCQ) Google form ●Qs on conversion Google doc

		●Distinguish between 1.aldehyde and ketones 2. two aldehydes 3.two ketones by chemical method. ●Outline mechanism for aldol and cross aldol reaction		
Computer Science	<u>**Unit 1: Programming and computational thinking**</u> **Ch :File handling :** ● Open and close a file, relative and absolute path ● Opening files with various file opening modes(r,r+,w,w+,rw,rw+) ● Reading from a file (read(),readline(),readlines()) ● Writing to a file/appending to a file ● Standard input/output and error stream ● Working with CSV files ● Working with data files	**Each student will be able to:** ● Create text files and open them using various modes ● Write and append to a text file ● differentiate between read(), readlines() and readline() methods ● Create database using csv and data files ● Append csv and data files and use csv and pickle modules and various methods associated with them	**Experiential Learning Activity** Write an English poetry of your syllabus in a text file and WAP to read that file and perform the following: ● count the number of vowels ● count the number of consonants ● number of lines Create csv files and store data related to a student in it. (roll no, name, marks, grade) and perform insertion, deletion and updation operations on the data. Create a data file to store product details including code, name, price and discount given and perform insertion, deletion and updation operations on the data.	● Assignments discussion in the class ● Class Test ● Practical tests ● CBSE sample questions

			HOTS Write a program to reverse the string of a text file without using any inbuilt function	
Economics	Employment and Growth Different kinds of unemployment. Rural and Urban Causes Strategies Human Capital Formation -How people are a resource. Role of human capital in development Environment and sustainable development RURAL DEVELOPMENT Identify the need for rural development and the major issues associated with it • understand the critical role	**Each student will be able to**: Identify the basic concepts relating to employment such as economic activity, worker, workforce and unemployment. Identify the nature of participation of men and women in various economic activities. Know the nature and extent of unemployment. Role of human capital formation Problems Factors affecting human capital identify the importance of human capital formation. Identify the ways it's done. Comprehend the difference between human development and capital	Crossword on unemployment Provision of employment opportunities is the only stable solution to the problem of poverty. Do you agree to this statement? Comment For preparing a bulletin board of your class with 40 students, who amongst the total is an actual asset to work-skilled or unskilled Quiz on Human capital formation	Class Test Assignment NCERT questions Class Test Revision assignment

	of credit and marketing systems in rural development	formation. Importance of environment Functions Problems Causes State of Degradation Sustainable development To analyze the current economy scenario in India. To make students understand the initiatives of the government in addressing it's Challenge. To familiarize student concept of current Challenges facing Indian economy, especially rural development	Song or Lyrics. Allow students to showcase talent and simultaneously learn content through preparing songs and lyrics. India has abundant natural resources substantiate the statement Distinguish between economic development and sustainable Hands-on experiments and activities. Some activities related to current Challenges facing Indian economy like picture graph, table, diagram, comprehension, different case studies related to primitive and modern are given to the students for lesson understanding. 	
Psychology		**Each student will be able to**	● Videos	● Art illustration

	Ch.6-Attitude and Social Cognition ● What is attitude? ● How are attitudes formed? ● How are attitudes changed? ● What is conformity, compliance and obedience? ● How are social influences perceived and processed?	● Understand how attitudes are formed and what it is composed of ● Understand concepts of attitude change ● Understand factors that influence attitude change ● Conceptualize prejudice and discrimination ● Know schemas and stereotypes and how impressions are formed ● Understand factors forming pro-social behavior	● Presentations ● Quiz ● Case discussion	● Assignments ● Google jamboards ● Group discussions
	Ch.7-Social Influence and Group Processes ● What are social influences? ● How are groups formed? ● How are groups retained? ● What processes are important for groups to be maintained?	**Each student will be able to** ● Define and illustrate the concept of groups and its types ● Influence of group and individual behavior ● Understand the concept of conformity, compliance and obedience ● Cooperation and competition ● Conflict resolution strategies	● Videos ● Presentations ● Quiz ● Assignments	● Group discussions ● Presentation ● Assignments
Biology	<u>**Microbes In human welfare**</u> 5 Classes ● Microbes in household products ● microbes in industrial	**Each student will be able to** ● Identify the role of various microbes in processing of various household products,in Production of bioactive organic compounds in pollution control	● Watch the presentation on Microbes & complete the activity sheet ● **Muddiest Point**—Unclear point followed by discussion.	● Google doc as worksheet. ● Crossword on the topic to be

	products, ● microbes in sewage treatment, ● microbes in biogas production **Principles of Biotechnology-** Classes- 8 ● Principles of Biotechnology ● Tools of recombinant DNA ● Processes of Recombinant DNA Technology	in fuel generation. ● Recall the name of various organisms involved in the process. **Each student will be able to** ● List the basic principle and role of various tools of the technology.Differentiate between; ● a) DNA andRecombinant DNA ● b) between sparged and stirred tank bioreactor ● c) exonucleases and endonucleases ● Explain the use of selectable marker for selection of recombinant cells. ● Explain the significance of PCR in recombinant genetic engineering.	**Lab activity-** **Test the two water samples for turbidity & microbes in it.** **AIL****- Song / poem on Microbes** ● Write difference between; a.traditional and modern biotechnology ● gene cloning and origin of replication ● List the, tools of recombinant DNA technology ● Explain the role of enzymes, vectors and selection methods in recombinant DNA Technology. ● Explain down streaming process and its significance **Experiential learning** **Which biotechnological tool is used to detect Presence of COVID Virus in people** **Explain the process.**	completed . ● Summarize the topic in a graphic organizer. ● **In-text questions** ● Make a mind map on the processes of biotechnology. ● Elaborate the convention used in the nomenclature of restriction enzymes
	Applications of	**Each student will be able to**	● Explanation involving the	

	Biotechnology- 8 Classes ● In agriculture, ● medicine ● transgenic & ● ethical issues related to Continued in September-	● Describe the applications of biotechnology in the field of agriculture, animals & medicine ● Enlist the benefits of technology to humans. ● Explain the ethical issues related to applications of Biotechnology.	applications of biotechnology in different fields for human welfare. ● Rearrange the steps involved in application of biotechnology as biopesticide **Research activity** ● RNA silencing is natural defense mechanism in some organism ● Using different resources identify the organism & the process. Group discussion- GMO are need of the hour; do you agree or disagree? Pair up to support your argument using digital tool Canva to Justify your point.	● Questions based on genetically modified agricultural crops, insulin production & gene manipulation, gene therapy, transgenic animals & bio piracy.
SEPTEMBER				
Subject	**Topics Covered/ No. of Periods**	**Learning Outcome**	**Activities**	**Assessments**

Mathematics	Part II **Differential Equations**	Each student will be able to *identify and solve a differential equation of the form dy/dx + Py = Q as a first order linear differential equation		Questions from NCERT done as CW and given as HW Oral questioning

	Part II
	Linear Programming Problem
		Each student will be able to
		  * get familiarised with terms objective function, linear constraints, non – negative constraints
		  * describe a linear programming problem as a one that is concerned with finding the optimal value (maximum or minimum) of a objective function of several variables that are non – negative and satisfy a set of linear constraints
		
		  - solve graphically the linear programming problems by corner point method by identifying feasible region (bounded), corner points and thus finding the optimal feasible solution
			Activity: To make a graphic organizer for the steps involved in solving a linear programming problem	Homework from NCERT (To be uploaded on Google classroom)
				Google Form
				https://diksha.gov.in/play/content/do_31309425016164352011711

	Part II
	Probability
		Each student will be able to
		
		  * define and find the conditional probability of an event E, given the occurrence of the event F
		  * list the properties of conditional probability
		  * apply multiplication theorem on
			LAB ACTIVITY on conditional probability
			
			Activity:To find the conditional probability in tossing of 2/3 coins
				Class work
				Homework from NCERT (To be uploaded on Google classroom)
				Google Form

		probability * define independent events * describe partition of a sample space * state theorem of total probability and apply to questions		
English	Third Level	Students will be able to answer the questions correctly.	Activity Students are encouraged to share their experience about what they would like to change in the times in which they live.	Class work Homework from NCERT (To be uploaded on Google classroom) Assignment
		Students will be able to appreciate the fact that it was a much more peaceful world before the two devastating wars which plunged the world in despair and depression.	Discuss about time travel.Ponder over the living conditions before the two world wars. Students are instructed to read the text thoroughly.	
	Interview	Students will be able to understand the concept of conducting an interview and its true purpose.	Reflection on the situation in the present scenario of joblessness. Formulate the content of the letter. You tube video	
	Enquiry Letter and Reply	Students will be able to write the letter using the correct format.	PPT:FORMAT AND CONTENT	
	(Personal and Business)		Students are instructed to write the letter using the correct format.	
	Letters of Placing Order, Cancellation of Order,		The content of each letter will be	

		Complaint letter	Students will be able to understand the poem and write the answers correctly.	Explanation of the concept of neglect. Unequal distribution of wealth among urban and rural sector	
		The Roadside stand	Students will be able to answer the questions correctly.	Buzz session Discussion what do you gather on one reading of the poem	
		Memories of Childhood		Literary devices used and how? Unequal distribution of wealth, its effects. Youtube video on caste and the importance of preserving one's own identity and letting every individual own his or her opinion in life.	
Physics	**UNIT 6** **RAY OPTICS(10)** · Reflection · Refraction · Dispersion · Optical Instruments **UNIT-6** **WAVE OPTICS (5)** · Huygens Principle · Coherent and incoherent sources · Diffraction Polarization	● Understand the fundamental difference between reflection and refraction and the laws governing the two phenomenon ● Relate the refractive index to the amount of refraction that a ray undergoes while traversing the medium and the fact that refractive index is wavelength related ● Reason out that why light with bigger wave length bends less and travels with higher velocity than light with lower wavelength ● Define dispersion and scattering of	**Practical :** To find the focal length of a convex lens by plotting graphs between u and v or between 1/u and 1/v. To find the focal length of a convex mirror, using a convex lens. Practical : To determine angle of minimum deviation for a given prism by plotting a graph	CBSE question answersClass Class test MCQ in google forms Worksheet and assignments Live worksheets Word wall

	UNIT 7 Dual nature of matter and radiation ·Photoelectric effect Matte waves **REVISION FOR MID TERM**	light ● Understand dispersive powers different glass prisms of different materials and distinguish between deviation and dispersion. ● Define wave front and Huygens principles ● Show reflection and refraction of a plane wave surface using wave fronts ● Define interference of light, state the conditions required for it ● Explain Young's double slit experiment and obtain expressions for fringe width, conditions for maximum and minimum amplitudes. ● Relate diffraction and wave nature and hence increase the resolving poser of optical instruments using electron beams ● Explain Diffraction due to a single slit, ● Differentiate between interference and diffraction ● Understand polarization phenomenon ● Define Brewster's law and Brewster's angle ● Give use of plane polarized light and polaroids.	between angle of incidence and angle of deviation. To draw the I-V characteristic curve for a p-n junction diode in forward bias and reverse bias. **ART INTEGRATION:** Write a poem on dispersion of light	
Chemistry	Biomolecules Carbohydrates Classification structure importance Protein-Types, enzymes, Denaturation of protein Vitamins deficiency diseases	Each student will be able to Define bio-molecules Like carbohydrates, Protein & nucleic acid Learn different type of proteins Explain different type of carbohydrates	● **Practicals** - Aim: To identify the cation and anion present in the given salt sample. ● Explain practical, chemical reactions. https://www.olabs.edu.in/	Google doc Application Think and search

| | Nucleic acid DNA & RNA

Solid state

Interatomic force
Types of solids
Packing in solids
Density calculation
Common defects | Learn about deficiency diseases
Explain the difference between DNA and RNA
Appreciate the role of these
Biomolecules In biosystem

Each student will be able to

Classify solids on the basis of binding forces
Understand structure of solids and unit cells, lattice,
Describe packing pattern in solids in 2D and 3D.
Calculate efficiency of packing.
Explain structure of ionic solids
Analyze the effect of dislocation in solids | | :Open book study

Assignment |
| | **REVISION FOR MID TERM** | | | |
| **Computer Science** | **Unit 2: Data Management**

 Ch : Database Concepts

 ● MySQL

 ● Relational data

 Model

 ● DDL, DML | **Students will be able to :**

 ● Differentiate between different data models
 ● Define different relational terminologies
 ● Work on Relational Algebra
 ● Create tables and insert data
 ● Perform queries on the tables created
 ● Use functions in the queries
 ● Group the data as per the queries | **Learning Activity**
 ● Create a database and insert records in it.
 ● Perform queries according to the requirements
 ● Perform queries based on the user requirements
 ● Apply Aggregate functions and group the data according to the queries | ● Databases created
● Queries performed
● Assignments
● Class tests
● Practical conducted
● CBSE Sample
  questions and papers |

	Commands ● Creating table ● Inserting records ● Making simple queries ● Constraints ● SQL Joins ● More on SQL ● Order By ● Group By ● Aggregate functions ● Other SQL Functions			
Economics	Government Budget and the Economy Meaning Objectives Structure Public revenue Public expenditure	**Each student will be able to:** Identify the spending categories and major revenue sources in the Union budget State the various objectives of the	Group based research and using it in class to discuss the importance of budget	Class tests Worksheets Google forms

	Types of deficit Meaning Objectives Structure Public revenue Public expenditure Types of deficit	Budget. Define fiscal policy, identifying the roles of tax rates and government spending Differentiate between the three types of budget. Identify the types of deficit Explain the various sources from which the budgetary deficits are financed	Art integration Designing the budget as presented in the Parliament using Worli art. Budget lesson starter worksheets for a lesson introducing budgeting will be given. It includes creating a personal budget for yourself, and earning money while prioritizing needs and wants. 	
Biology	<u>**REVISION ON THE TOPICS-**</u> **ANIMAL & PLANT REPRODUCTION** **PRINCIPLES OF INHERITANCE**			

	MOLECULAR BASIS OF INHERITANCE MID TERM EXAMINATION			
Psychology	**Ch.8- Psychology and Life** ● What is the relationship between individuals and their environment? ● How do environmental aspects transform consciousness? ● How do environmental conditions impact the psyche? **Ch.1-Variations in Psychological Attributes** ● What is intelligence? ● What are the various theories of intelligence? ● What are different individual psychological attributes? ● What are various ways of assessment of psychological attributes?	**Each student will be able to** ● Conceptualize the human environment relationship ● Understand environmental effect on human behavior ● Promote pro-environmental behavior ● Dealing with aggression, violence and peace **Each student will be able to** ● Understand key concepts of psychological attributes, intelligence, theories of intelligence ● The concept of assessment of intelligence ● The role of culture and intelligence ● The role of emotional intelligence and creativity	● Virtual field visits ● Videos ● Presentations ● Quizzes ● Quizzes ● Art work ● Assignments ● Group Discussions ● Videos ● Case study interaction	● Art work ● Group Discussions ● Assignments ● Classwork ● Presentation ● Sharing key insights
OCTOBER				
Subject	**Topics Covered/ No. of**	**Learning Outcome**	**Activities**	**Assessments**

	Periods			
Mathematics	REVISION TERM I PRE-BOARDS TERM I			
English	Poets and Pancakes	Students will be able to answer the questions correctly.	Flip	Worksheet: Short questions and answers
	The Tiger King	Students will be instructed to research on the prevailing scenario during the black and white era of movie	Detailed explanation Students were instructed to watch the video on the logo of the Gemini Studio Does the chief astrologer divulge the cause of death of the little Tiger King?	Assignments CBSE Questions discussed in the class. HW and CW to be uploaded in the google classroom.
	Going Places	Discuss their research about the tiger population in India pre-independence and post-independence.		
	Journey to the end of the Earth	What did the students discover? Discussion Reference:An Era of darkness Shashi Tharoor	How did English education affect the young prince in his later life? Long Questions:	
	Commercial advertisements and Poster	World life conservation and the significance of the story.	Do you agree with the statement that the chief astrologer's	
	Lost Spring	Students will be instructed to analyse the chapter. Students will be able to state the teenage infatuation affecting the main	Thread bear analysis of the	

		character and her illusions. State correctly the factors which lead to the greenhouse effect and how it shall lead to disaster for the rest of the world in future. Apply the format correctly and answer the questions correctly. List the different circumstances which hinder their growth.Mukesh and Saheb e Alam.	characters and the situations in life. Reference to the context and long answers discussed. Activity:Find out about the greenhouse effect on the globe. Discussion.	
Physics	<u>UNIT 9</u> SEMICONDUCTOR DEVICES · p-n junction · Semiconductor diode · Rectifiers · Photo diode · LED · Solar cell **Atomic nucleus** · **Atomic Spectra** · **De-Broglie hypothesis** · **Radioactivity** · **Nuclear Energy**	• · Explain the band theory concept to differentiate between metals, insulators and semiconductors • · Relate atomic level bonding and intrinsic and extrinsic semi conductors • · Comprehend the functioning of p-n junction, depletion layer. • · Correlate semi conductor diodes in forward bias and reverse bias • Understand and reproduce working of diode as rectifier, solar cell photo cell, photo diode LED, · Visualize the structure of atom, size of nucleus, composition of nucleus-protons and neutrons · Explain Alpha particle scattering experiment · Understand nuclear instability-radioactivity-Alpha, Beta and Gamma particles and their properties, radioactive decay law, Mass	. **ART INTEGRATION:** Create a Miniature Painting on Half wave rectifier	CBSE question answersClass Class test MCQ in google forms Worksheet and assignments Word wall

		energy relation, mass defect, binding energy per nucleon,		
Chemistry	**d-f block elements** ●general characteristic of transition elements ●general trends in properties ●Colour and magnetic character of ions ●lanthanoid and actinoid contraction ●reduction potentials and oxidation state	**Each student will be able to** ● Recall electronic configuration of transition elements and justify their position in periodic table ● Characterize and explain general trends in properties ● Predict stability of oxidation states on transition elements. ● Define lanthanoid and actinoid contraction ● And state one reason for such phenomenon ● Mention at least two consequences /applications of this contraction. ● Compare the gen.config. and oxidation states of lanthanides	● Practical:Analyze the given food sample for the presence of carbohydrates/fats /proteins	Reasoning qs (oral) Quick memory test class test(open book) Think and search :Open book study Group work evaluation Assessment Google form Google doc
	Co -ordination Chemistry ● Werner theory ● Nomenclature rules ● Magnetic property ● Hybridization ● Geometrical shapes ● Crystal field theory ● Drawing and Interpretation of octahedral and	**Each student will be able to** ● Define the terms involved in coordination comp. ● ▪Follow the rules of IUPAC nomenclature. ● Predict the type of isomerism in coordinate compounds. ● Draw the possible isomers of a compound given.	● Art integration- Colour wheel showing change in colour with ligand concentration	

	tetrahedral complexes and their applications	• Outline the postulates of VBT and CFT. • Understand the nature and geometrical shapes of complexes by VBT,CFT. • List important coordination compounds and their applications in various fields		
Computer Science	**Interface Python with MYSQL** • Introduction • Python –MySQL Connectivity **Revision Term I** **Pre Boards Term I**	**Students will be able to do the connectivity of Python with MySQL.**		
Economics	**Revision Term I** **Pre Boards Term I**			
Psychology	**Ongoing Simultaneously from May –October PRACTICALS:** 1 Case Study and 5 Psychological Tests	Students will be able to create a case study project on a specific disorder and complete five psychological tests administration as per CBSE guidelines.	• File creation and completion through handwritten mode	• Viva voice questions to be practiced on a group level • Sharing results and interpretations discussed • Practice testing and discuss limitations and advantages

Biology	**Applications of Biotechnology** (3 classes) Transgenic & ethical issues related to biotechnology (contd.) **Organism & population-** (6 classes) • Interactions of organisms with abiotic & biotic factors. • Community interaction • Structure & function of ecosystem, productivity, decomposition, energy flow, ecological pyramids, • ecological s	**Each student will be able to**: • Describe the applications of biotechnology in the field of agriculture, animal husbandry & medicine. • Enlist the benefits of technology to humans. • Explain the ethical issues related to it **Each student will be able to**: • Explain the factors affecting the ecosystem. • Explain the adaptations in the organisms in an ecosystem. • Discuss the pattern of population growth & interaction	As stated above. • Brainstorming on the various aspects of concepts. • Explanation of the graphs shown. • Completing graphic organizers. • The Muddiest point-student will ask for an unclear point in the finished concept. **Make a list of 10 vocabulary words from the topic.** **Lab activity:** **1.Study the water holding capacity of soil.** **2. Study adaptations of aquatic & xerophytic organisms. Plants and Animals.**	As stated above. • Worksheet Questions based on abiotic factors influencing organisms, & adaptations. • Question on features of population, growth curves, examples of organisms to identify interactions in a biotic Community In the worksheets. • In-text questions, assignment questions. • Make a crossword on population interactions
NOVEMBER				
Subject	**Topics Covered/ No. of Periods**	**Learning Outcome**	**Activities**	**Assessments**

Mathematics	TERM 1 BOARD EXAMS			
English	Revision for pre boards	To clear doubts , practice questions from previous years papers	Quiz	Long and short answers
Physics	TERM 1 BOARD EXAMS			
Chemistry	**Carboxylic acids** **Naming** **Reactions of preparation and properties** **●Acidic nature** **And effect of Ewg** **Organic compounds containing Nitrogen** **●Amines as derivatives of** **ammonia having a pyramidal** **structure;** **● classification of amines as**	**Each student will be able to:** **●Describe two important method of preparation of carboxylic acids** **●Express acidic nature in terms of Pka .** **●Predict the acidic strength when EWG ispresent** **Each student will be able to** **●Write some trivial and IUPAC names of compounds containing nitrogen** **●Correlate physical and chemical properties of amines** **●Describe methods of preparation of these compounds (at least two)** **●Explain ring substitution of aniline .** **●Distinguish between prim,sec,tert.amines** **●Learn types of reactions of amines** **●Appreciate use of organic compounds in everyday life.** ●	**AIL-Digital Collage of different biomolecules properties and uses**	●Name reactions (written test) Google doc ●Conversion sheet(reaction) MCQ test ●Assessment worksheet ● Open book test ● Group discussion ● (defects in solids

	primary, secondary and tertiary; ● Name: IUPAC system; ●methods of preparation of amines ●properties of amines; ● Test for primary, secondary and tertiary amines;			
Computer Science	**TERM 1 BOARD EXAMS**			
Economics	**TERM 1 BOARD EXAMS**			
Psychology	**Revision Ch.1-4**	CBSE Sample papers to be practiced	Oral quiz Group Discussion Written mock papers	Mock papers
Biology	<u>**Biodiversity**</u> (6 Classes) Biodiversity types, causes for loss of biodiversity, strategies for biodiversity conservation	**Each student will be able to** ● Explain the word biodiversity & its levels Identify the importance of biodiversity.	● Discussion on basic concepts on biodiversity using Presentation ● Completing the activity sheet with pie charts. AIL- Depict Biodiversity of Delhi	● Google doc with Assessment questions related to conservation strategies of biodiversity & factors causing loss of biodiversity

		Specify the causes for loss of biodiversity. Discuss the strategies to protect it.	using an Indian art form-Mangla/Gond Art. Quizzing by the students.	

DECEMBER-JANUARY

Subject	Topics Covered/ No. of Periods	Learning Outcome	Activities	Assessments
Mathematics	**Part II** **Vector Algebra**	**Each student will be able to** * differentiate scalars and vectors by giving examples * describe a vector with initial and terminal points with a direction and magnitude as the distance between the endpoints * describe a vector in space *describe a vector in space in terms of its direction cosines * establish a relationship among the direction cosines * recognise that direction ratios are proportional to direction cosines * list the types of vectors and define them like zero vector, unit vector , coinitial vectors, collinear vectors, equal vectors, negative of a vector * add two vectors using triangle law of vector addition * list the properties of vector addition	Lab Manual Activity: To prove angle in a semi circle is a right angle	Homework from NCERT (To be uploaded on Google classroom) Google Form https://diksha.gov.in/play/content/do_31309369950181785611602 (MCQ'S)

	Part II **Three Dimensional** **Geometry**	* multiply a vector by a scalar * represent a vector as in its component form * state the relation between the scalar components of collinear vectors * apply the section formula to questions * define scalar product of two vectors *list the properties of scalar product *describe the projection of vector on a line *define vector or cross product of two vectors * list the properties of cross product *find the area of a parallelogram using cross product **Each student will be able to** * define the direction cosines of a line * find the direction cosines of a line joining two points * state the relation between direction cosines and numbers * define skew lines * find the angle between skew lines * state the relation between the direction cosines(ratios) of two lines and the angle between them * find the equation of a line that passes through a given point and parallel to a given vector in vector and cartesian form * find the equation of a line passing through two given points	Quiz https://in.ixl.com/math/class-xii/find-the-component-form-of-a-three-dimensional-vector	Google Form Questions from NCERT and exemplar to be done as CW and given as HW Oral questioning

	JANUARY **REVISION FOR TERM II**	* find the shortest distance two lines * state the formula for finding distance between skew lines and parallel lines. * state the equation of a plane in normal form in both vector and cartesian form * find the equation of plane perpendicular to a given vector and passing through a given point in vector and cartesian form * find the equation of a plane passing through three noncollinear points * state the intercept form of the equation of a line * find the equation of a plane passing through the intersection of two given planes *find the distance of a point from a plane *solve questions based on the above stated concepts		
English	Revision for pre boards	To clear doubts , practice questions from previous years papers	Quiz	Long and short answers
Physics	Revision for pre boards	To clear doubts , practice questions from previous years papers	● Practice tests ● Quizzes ● Discussions	● Class Tests ● Revision worksheets ● CBSE Sample paper
Chemistry	**File** **Project** **Revision of syllabus**	● keywords ● Clarification of any concepts that are still not clear	● Practice tests ● Quizzes ● Discussions	● Class Tests ● Revision worksheets ● CBSE Sample paper

		● CBSE Sample Paper		
Computer Science	**DECEMBER** **Interface Python with MYSQL** ● Installing MySQL Connector ● Cursor object ● Creating database ● Connection No. of classes: 7 **Unit 5: Networking Concepts** ● Evolution of Networking ● Different Topologies ● Transmission media ● Switching techniques ● Communication	**Students will be able to do the connectivity of Python with MySQL.** **Students will be able to :** ● Describe evolution of network ● Differentiate between various communication devices ● Define and mention usage of various protocols ● Use networking tools ● Apply concepts on case studies ● Define and categorize guided and unguided media	**Learning Activity** Explore school's networking architecture in different blocks and usage of various devices Assessment Activity Solve the given sample papers	● Assignments ● Class test ● Project Work

	terminologies ● Network devices ● Protocol ● Network Security Concepts ● WebPages, Web Servers ● Open source software ● Basic network tools **JANUARY** **Project Work, Program File, Recapitulation of all the concepts done in the class**			
Economics	**Sustainable development** **File** **Project** **Revision of entire syllabus**	● Sustainable development ● Importance of environment ● Functions ● Problems ● Causes	India has abundant natural resources substantiate the statement ● Distinguish between economic development and sustainable ● Practice tests ● Quizzes ● Discussions	● Class Tests ● Revision worksheets ● CBSE Sample paper

		- State of Degradation - To analyze the current economy scenario in India. To make students understand the initiatives of the government in addressing it's Challenge. - keywords - Clarification of any concepts that are still not clear - CBSE Sample Paper		
Psychology	**Revision Ch.5-9** **Practical Files**	- CBSE Sample papers to be practiced - Files to be checked	- Oral quiz - Viva voice questions	- Mock administration - Written mock papers
Biology	**Revision of syllabus File submission and Project submission**	- Practise based on diagrams - Practice of CBSE papers.	Practice questions as written followed by discussion of responses	Revision worksheets