Vailankanni Public School, Krishnagiri
MONTH-WISE ACADEMIC PLANNER - JUNE & JULY 2023
Grade - 12

MONTH	WEEK	TOPIC	INTEGRATED PORTION	ACTIVITY	WORKSHEET
English (June)	I	Third Level		Letter to the Editor	Third Level
	II	A Thing of Beauty		Listening skill (Aesthetics)	A Thing of Beauty
	III	Journey to the End of the Earth		Report Writing	Journey to the End of the Earth
	IV	Deep Water		Speaking Assessment	(I developed a phobia…)
English (July)	I	The Rattrap		Article Writing	Worksheet on Rattrap
	II	The Rattrap & Roadside Stand		Project Work	Worksheet on Roadside stand
	III	Roadside Stand, Indigo		Project Work	Worksheet on Article Writing
	IV	Indigo, The Enemy		Project Work	Worksheet on Indigo
Maths (June)	I	Definite integration Fundamental Law of integral calculus Properties of definite integration	Short cut methods to find the values of definite integrals. Previously asked JEE question models. Problems from Pearsons JEE Book	Visualising Definite integrals using graphing software like geo Gerba or desmos.	MCQ problems on definite integration Previously asked board questions
	II	Definite integration Mod functions , Greatest Integer Functions.	HOT questions on Mod and GEFs	Encourage children to develop the general structure for the transformation of modulus functions.	Integration of Mod functions & GEF
	III	Application of Integration Area of the region bounded by the X-axis and the function F(x)	Discuss the disk method to calculate the area	Discuss the wide range of applications of integration	Area calculation based on the X-axis , for different functions
	IV	Area calculation of the closed figures like circles ,Ellipse	HOT questions on application of integration	Use Graphing tools to sketch the integrable area of the given function which enable children to imbibe the concept thoroughly.	Area calculations of different geometrical figures .

Maths (July)	I	Differential equations Order & Degree Variable separable method	Previously asked problems on order and degree.	Demonstrate the formation of differential equations.	Variable separable method and order and degree calculation.
	II	Homogeneous differential equations & linear equations	Homogeneous differential equations & linear equations	Explore the wide range of application of differential equations in other branch of science .	Questions from Homogeneous differential equations & linear equations
	III	Vector Algebra , Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, Introduction, Dot product and cross product .Angle between the vectors, Inequalities	Scalar triple products STP. Discuss the application of STP	Demonstrate the three dimensional coordinate axes system with the help of a model. Explain the method of calculating the coordinates of a point in space.	Type of vectors & multiplication of vectors
	IV	Three dimensional geometry Direction ratios & direction cosines ,Angle between the libes, Projection of a vector	Missing angle problems & Previously asked Questions		Three dimensional geometry

Physics (June)	I	Chapter–5: Magnetism and Matter Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis (qualitative treatment only),	21.34 21.35		EXERCISES 5.1 to 5.5
	II	torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines.	21.36, 21.37		EXERCISES 5.5 to 5.9
	III	Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties	21.38, 21.39, 21.40	Tabular column for classification of materials-Chart/A4	Practice Questions
	IV	Chapter–6: Electromagnetic Induction Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.	22.1, 22.2, 22.3		EXERCISES 6.3 to 6.10 Practice Questions

Physics (July)	I	Chapter–7: Alternating Current ; peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only)	23.1 23.2 23.4		EXERCISES 7.5 to 7.10
	II	resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer	23.6 23.7 23.8	To find the frequency of AC mains with a sonometer-Experiment	EXERCISES 7.11 to 7.15
	III	Chapter–8: Electromagnetic Waves Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only).	23.12 to 23.17		8.1 to 8.10
	IV	Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.	24.1 24.2 24.3	Electromagnetic spectrum-diagram in chart.	Practice Questions

Chemistry (June)	I	• Structures of the compounds containing functional groups namely carbonyl and carboxyl groups; • Important methodsof preparation and reactions of these classes of compounds.	Page No: 26.1 to 26.25	Identify the functional group from the given organic compound by using suitable chemical test.	Worksheet-1 (IUPAC)
	II	• Mechanism of a few selected reactions of aldehydesand ketones; • Factors affecting the acidity of carboxylic acids and their reactions. • uses of aldehydes, ketones and carboxylic acids.	Page No:26.26 to 26.60	Identify the different types of alcohols by using suitable chemical test.	Worksheet-2 (Preparation of Aldehydes)
	III	• Define the biomolecules like carbohydrates,proteins and nucleic acids; • Classification of carbohydrates, proteins, nucleic acids and vitamins on the basis of their structures.	Page No: 28.1 to 28.21	Show the relationship between lipids, nucleic acids, proteins and carbohydrates including the connection between their subunits and elements that make up the molecules.	Worksheet-3 (Physical Properties)
	IV	Explain the difference between DNA and RNA. Importance of biomolecules in day today life.	Page No:28.22 to 28.53	Test for carbohydrates,test for reducing and non reducing sugars.	Worksheet-4 (Ketones & Carboxylic acid)

Chemistry (July)	I	• Electrochemical cell and difference between galvanicand electrolytic cells • Nernst equation for calculating the emf of galvanic cell and standard potential of the cell relation between standard potential of the cell • Gibbs energy of cell reaction and its equilibrium constant	Page No: 105 to 117	Plotting graphs between molar conductance and concentration, plotting graph for 1 and 2 order reactions conc. vs time	Ecell calculation
	II	Resistivity , conductivity (k) and molar conductivity m) of ionic solutions • Difference between ionnic (electrolytic) and electronic conductivity	Page No: 118 to 128	Observing the galvanic cell and its working in the lab.	Numericals
	III	Kohlrausch law and its applicationsquantitative aspects of electrolysis • construction of some primary and secondary batteriesand fuel cells • corrosion as an electrochemical process	Page No: 129 to 160	Do working model for different cells	Numericals
	IV	• preparation, properties, structures and uses of some important compounds such as K2Cr2O7 and KMnO4	Page No : 161 to 178	Teacher will demonstrate and the Students will perform the following identifying tests (chemical reactions) under qualitative analysis to study the properties of the compounds.	MCQ based on Electrochemistry

Biology (June)	I	1.Concept of diseases and their causative agents. 2.Common communicable diseases and their causes, symptoms and cure.	Zoology module 2 Pg. 5, 6 and 9. (Infection, symptoms and mode of transmission)	1.To make a chart on various diseases. 2.PPT on various awareness program on malaria	MCQ PYQ
	II	1. Basic concepts of immunology – vaccines. 2. Concept of HIV and AIDS. 3. Adolescence –drug and alcohol abuse.	Zoology module 2 Pg. 11 and 22 (Different cells/tissues involved in immune system).	1. To make a project on cancer. 2. To make a chart on adaptive immunity.	MCQ PYQ and Diagram based questions
	III	1.Importance of microbes in everyday life. 2.Importance in agricultural production. 3.Sewage treatment and energy generation.	Botany module 2 Pg. 43 (Microbes in Bioremediation).	1. Video presentation on Sewage treatment and energy generation.	MCQ PYQ Numerical questions
	IV	1.Role of microbes as biocontrol agents and bio fertilizer. 2.Production of antibiotics and its judicious use.	Botany module 2 Pg. 44 and 45 (Microbial actions as biocontrol agents and bio fertilizer).	1. Sewage treatment and energy generation	MCQ PYQ
Biology (July)	I	1. Introduction to the concept of biotechnology and its applications. 2. Principles and processes.	Botany module 2 Pg. 66, 71, 74 and 76.	1. Video presentation on tools of biotechnology 2. Isolation of DNA (Lab)	MCQ PYQ Numerical questions
	II	1. Method of genetic engineering 2. Formation of rDNA.	Botany module 2 Pg. 86, and 87.	1. To Prepare a project on recombinant DNA technology	MCQ PYQ Sample questions
	III	1. Concept of human insulin and vaccine production. 2. Stem cell technology. 3. Gene Therapy	Zoology module 2 Pg. 100 and 101.	1. PPT on various GMOs: both plants and animals.	MCQ PYQ Diagram based questions
	IV	1. Genetically modified organisms-Bt crops, transgenic animals. 2. Biosafety issues. 3. Bio piracy and patents.	Botany module 2 Pg. 123, and 124	1. To prepare a project on artificial insulin production by Eli lily technology.	MCQ PYQ Sample questions

Computer Science (June)	I	Computational thinking and programming-2	Data structure-1 - Introduction – Different Data structure- Operation on Data structure- Linear list Data structure	Lab Activity to code Linear list Data structure & Diagrammatic Algorithm	MCQ Type
	II	Computational thinking and programming-2	Data structure-1 – Traversing Linear list – Sorting linear list- Nested / 2D List in Python	Lab Activity to code Linear list Data structure by using Searching ,Traversing,Sorting Algorithm	Case Based Question
	III	Computational thinking and programming-2	Data structure- II – Queue- Implementation Queues in Python- variation in Queues – Queue Application	Lab Activity to code Queue Algorithm in Data structure & Diagrammatic Algorithm	Programming Based Questions
	IV	Computational thinking and programming-2	Data Structure-II- Stacks- Implementation Stacks in Python- Stack Application - Variation	Lab Activity to code Stacks Algorithm in Data structure & Diagrammatic Algorithm	Programming Based Questions

Computer Science (July)	I	Computational thinking and programming-2	Data structure-1 - Introduction – Different Data structure- Operation on Data structure- Linear list Data structure	Lab Activity to code Linear list Data structure & Diagrammatic Algorithm	MCQ Type
	II	Computational thinking and programming-2	Data structure-1 – Traversing Linear list – Sorting linear list- Nested / 2D List in Python	Lab Activity to code Linear list Data structure by using Searching ,Traversing,Sorting Algorithm	Case Based Question
	III	Computational thinking and programming-2	Data structure- II – Queue- Implementation Queues in Python- variation in Queues – Queue Application	Lab Activity to code Queue Algorithm in Data structure & Diagrammatic Algorithm	Programming Based Questions
	IV	Computational thinking and programming-2	Data Structure-II- Stacks- Implementation Stacks in Python- Stack Application - Variation	Lab Activity to code Stacks Algorithm in Data structure & Diagrammatic Algorithm	Programming Based Questions

AI (June)	I	Unit 1: Model Capstone Project	Intoduction: AI Project Cycle, Model Capstone Project , The seven patterns of AI, Understanding the Problem	Discussion: 6 stages of AI Project cycle and Capstone Project	Basic Concepts
	II	Unit 1: Model Capstone Project	Decomposing the problem through DT Framework, Types of Approaches, Data Requirement and Modeling Approach	Students choosing their project topic and understanding their problem	Types of Approaches
	III	Periodic Assessment-I			
	IV	Unit 1: Model Capstone Project	How to validate model quality? Pre-Requisites for Train and Test-Data, Loading a Dataset, Splitting, Fitting the data into the model	Sudents searching data regarding their projects	Case based questions
AI (July)	I	Unit 1: Model Capstone Project	Introduce the concept of cross validation, Metrics of model quality by simple math and examples.	Students gathering data/information for their projects.	MCQs
	II	Unit 1: Model Capstone Project	Recapitulation of Model Capstone Projeect	Students exploring their data according to their needs.	MCQs and Q/A
	III	Unit 2: AI Model LifeCycle	AI Project Cycle and Stages: Stage I, Stage II: Data Labelling	Students modelling their project.	Case based questions
	IV	Unit 2: AI Model LifeCycle	AI Project Cycle and Stages: Stage II: AI Modelling, Stage III.	Students modelling their project.	Case based questions

Accountancy (June)	I	DISSOLUTION OF PARTNERSHIP		PRACTICAL SUMS	Page No 8.65,8.66,8.67
	II	REALISATION ACCOUNTS		NUMERICALS	Accounting Challenge 12-15
	III	COMPARATIVE BALANCE SHEET&P&L ACCOUNT		PROJECT	PAGE NO 3.33-3.43
	IV	RATIO ANALYSIS		PROJECT	Accounting Challenge 1-13
Accountancy (July)	I	FINANCIAL STATEMENT ANALYSIS		PROJECT	PAGE NO 1.41-1.42
	II	SCHEDULE -III OF BALANCE SHEETS		PROJECT	PAGE NO 1.43-1.44
	III	CASH FLOW STATEMENT		PROJECT	PAGE NO 5.125-5.135
	IV	CASH FLOW STATEMENT WITH ADJUSTMENTS		PROJECT	PAGE NO 5.136-5.156

Business Studies (June)	III	Ch-8	Meaning, Learning outcome of Controlling	Understanding controlling through a scenario of a company	Q/A,MCQ'S
		controlling	Importance		
			Limitations	Some examples of corrective actions	case based questions
	IV		Relationship btw planning & controlling,Process ,Techniques used		
Business Studies (July)	I	Controlling	Techniques of managerial control	Activities on Budgetory control ,Breakeven chart	MCQ'S
			Traditional and modern Techniques		
	II		ROI,Ratio analysis, Responsibility accounting, MgtAudit ,PERT& CPM,MIS	Collection of Recent Business news related to Budgetary control	conducting seminar
	III	Ch-9 ,Financial Mgt	Concept role& objectives of Financial mgt ,Financial Decisions	financial data collection of 3 MCN's	MCQ'S & Short answers test
	IV		Factors affecting the various financial decisions of a firm	% of Dividend and Interest paid by Companies to its share holders of a particular company	Case based questions & Assertion and Reason

Economics (June)	I	Aggregate demand and its components		Class test -1 (Topic	Calculation of consumption function
	II	Aggregate supply and its components		Class test -2 (Topic 1))	Calculation of Saving function
	III	Income determination and multiplier		Class test - 3 (Topic 3)	Numerical related to multiplier
	IV	Excess demand, Deficient demand		Class test - 4 (Topic 4 and 5)	Construction of diagram
Economics (July)	I	Numerical problems related to AD and AS		Class test -5 (Topic 1)	Numerical problems related to AD and AS
	II	Numerical problems related to income multiplier		Class test -6 (Topic 1))	Numerical problems related to income determination and multiplier
	III	Employment, Types of employment, Problems of unemployment		Class test - 7 (Topic 3 to 5)	WS related to disguised unemployment
	IV	Remedial measures to correct unemployment, Unemployment in India		Class test - 4 (Topic 6 and 7)	WS related employment generation programmes of the government