

**SCIENCE**  
**I - TERM (APRIL'15 TO SEPTEMBER'15)**

MONTH	TOPIC	ACTIVITY	CAL/TAL	DAY
April	MATTER IN OUR SURROUNDING Definition of matter; solid, liquid and gas; characteristics - shape, volume, density; change of state-melting (absorption of heat), freezing, evaporation (Cooling by evaporation), condensation, sublimation.	PRACTICAL No. 1 : To test (a) The presence of starch in the given food sample. (b) The presence of the adulterant methanol yellow in Dal.	01	22 days
May and June	THE FUNDAMENTAL UNIT OF LIFE Cell - Basic Unit of life : Cell as a basic unit of life; prokaryotic and eukaryotic cells, multicellular organisms; cell membrane and cell wall, cell organdies; chloroplast, mitochondria, vacuoles, en ioplasmic reticulum, Golgi apparatus; nucleus, chromosomes - basic structure, number.	PRACTICAL No. 2 : To prepare (a) a true solution of common salt, sugar and alum (b) a suspension of soil, chalk powder and fine sand in water (c) a colloidal of starch in water & egg albumin in water & distinguish between these on the basis of <input type="checkbox"/> Transparency <input type="checkbox"/> Filtration criterion <input type="checkbox"/> Stability  PRACTICAL No. 3 : To prepare (a) a mixture (b) a compound using iron fillings and sulphur powder and distinguish between these on the basis of : ( i). Appurtenance i.e., homogeneity and heterogeneity (ii). behavior towards a magnet (iii). behavior towards carbon disulphide as a solvent iv. effect of heat.	01	8 days
	MOTION : Distance and displacement, velocity; uniform and non-uniform motion along a straight line; acceleration, distance-time and velocity-time graphs for uniform motion and Uniformly accelerated motion, equations of motion by graphical method; elementary idea of uniform circular motion.	PRACTICAL No. 4 : To prepare stained temporary mounts of (a) onion peel & (b) human cheek cells and to record observations and draw their labeled diagram. PRACTICAL No. 5 : To identify parenchyma & sclerenchyma tissues in plants, striped muscle fibers & nerve cells in animals, from prepared slides & to draw their labeled diagrams.	01	
July	IS MATTER AROUND US PURE : Elements, compounds & mixture, Heterogeneous & Homogenous mixtures, colloids & Suspension.	PRACTICAL No. 6 : To carry out the following reactions & classify them as physical or chemical change : (a) Iron with $\text{CuSO}_4$ solution in water (b) Zinc with dil. $\text{H}_2\text{SO}_4$ (c) Burning of magnesium in air. (d) Heating of $\text{CuSO}_4$ (e) Sodium Sulphate with $\text{BaCl}$ in the form of their solutions in water.	01	23 days
	FORCE & LAWS OF MOTION : Force & motion, Newton's laws of motion, Inertia of a body, inertia of mass, momentum, force & acceleration, elementary idea of conservation of momentum, action & reaction forces. GRAVITATION : Gravitation; universal law of gravitation, force of gravitation of the earth (gravity), acceleration due to gravity: mass and weight; free fall.	PRACTICAL No. 7 : To separate the components of a mixture of sand, common salt and ammonium chloride (or camphor) by sublimation		

August	TISSUES, ORGANS, ORGAN SYSTEM, ORGANISM Structure and functions of animal and plant tissues (four types in animals; meristematic and permanent tissues in plants)	PRACTICAL No. 8 : To determine the melting point of ice and the boiling point of water.	01	23 days
	Plant and animal breeding and selection for quality improvement and management; use of fertilizers, manures; protection from pests and diseases; organic farming.	PRACTICAL No. 9 : To determine the mass percentage of water imbibed by raisins. PRACTICAL No. 10 : To establish relationship between weight of rectangular wooden block lying on a horizontal table & minimum force required first to move it using a spring balance.		
Sept.	Revision	SA I (Pen Paper Test) FA I : 10, FA II - 10, SA I : 30 TOTAL : 50		12

## II - TERM (OCTOBER'15 TO MARCH'16)

MONTH	TOPIC	ACTIVITY	CAL/TAL	DAY
Oct.	ATOMS AND MOLECULES FLOATATION	PRACTICAL No. 1 : To verify laws of reflection of sound. PRACTICAL No. 2 : To determine the density of solid (denser than water) by using a spring balance and a measuring cylinder. PRACTICAL NO. 3 To establish the relation between the loss in weight of a solid when fully immersed in a. tap water b. strongly salty water, with the weight of water displaced by it by taking at least two different solids.	01	16 days
Nov.	WORK AND ENERGY DIVERSITY IN LIVING ORGANISM	PRACTICAL No. 4 : To observe and compare the pressure exerted by a solid iron cuboids on sand while resting on its three different faces and to calculate the pressure exerted in the three different cases.	01	21
	SOUND	PRACTICAL No. 5 : To determine the velocity of a pulse propagated through a stretched string/slinky	01	
Dec.	STRUCTURE OF THE ATOM, MOLE CONCEPT	PRACTICAL No. 6 : To study the characteristics of Spirogyra/ Agaricus, Moss/Fern, Pinus (either with male or female cone) and an Angiosperm plant. Draw and give two identifying features of groups they belong to. PRACTICAL No. 7 : To verify the law of Conservation mass in a chemical reaction PRACTICAL No. 8 : To observe and draw the given specimens-earthworm, cockroach, bony fish and bird. For each specimen record a. one specific feature of its phylum b. one adaptive feature with reference to its habitat	01	20 days
Jan	WHY DO WE FALL ILL	PRACTICAL No. 8 : To observe and draw the given specimens-earthworm, cockroach, bony fish and bird. For each specimen record a. one specific feature of its phylum b. one adaptive feature with reference to its habitat.	01	23
Feb	NATURAL RESOURCES	PRACTICAL EXAM	01	23
March	Revision	SA II (Pen Paper Test) FA III : 10, FA IV - 10, SA II : 30 TOTAL : 50		10

SL. NO.	ACTIVITY	MARKS FOR FA II	SL. NO.	ACTIVITY	MARKS FOR FA II
1.	PRACTICAL EXAM ( Phy + Chem + Bio )	10 + 10 + 10	5.	MODEL	10
2.	VIVA ON PRACTICAL	10	6.	PPT	10
3.	PRACTICAL COPY	5 + 5 + 5 (PCB)	7.	CW/HW/ASSIGNMENT	5 + 10(CW+HW)
4.	INVESTIGATORY PROJECT	10			

**NOTE:** FA II / FA IV PRACTICAL EXAM IS COMPULSORY