ACADEMIC PLANNER FOR CLASS XI Physics.(2019-2020)				
DATE/DAY	CHAPTER/CONTENTS	Mode of assesment	CW/HW	EXPERIMENTS/LAB ACTIVITY
May	CHAPTER 1(PHYSICAL WORLD)			To measure the diameter of a small speherical/cylindrical body by using a pair of vernier calliper
(1--15)	What is physics?	Class test of basic concept		
(11 days)	Scope and excitement of physics			
	Physics,technology and society			To measure the dimensions of a regular body of mass using vernier calliper and hence find its
	Fundamental forces in nature			
	CHAPTER 2 (UNIT AND MEASUREMENT)			
	Need for measurement: Units of			
	measurement,system of units,SI units			
	Fundamental and derived units	REVISION		
	Length, mass and time measurement	N.P.based on fundamental and derived unit.		
JULY	CHAPTER 2 (UNIT AND MEASUREMENT)			
(1--15)	Dimensions of physical quantities	Test of dimensions will be taken	CW:Questions related to dimensional analysis	To determine the internal diameter and depth of beaker/calorimeter by using a pair of vernier
(12 days)	Dimensional formulae and dimensinal equation			
	Dimensional analysis and its application		HW: Practice of questions of dimensions	
	Accuracy,precision of instrument and error in measurement			
	Significant figures			
JULY	CHAPTER 3(MOTION IN STRAIGHT LINE)			
(16--31)				
(14 days)	Frame of reference	Test of topics of motion in a straight line	CW:Ncert numericals ofmotion in a straight line	To measure the diameter of a given wire by using a screw gauge

	Position, path length and displacement			
	Position-time graph,speed and velocity.	MCQ of graphs related questions	HW:Questions of chapter will be given	
	Uniform and non-uniform motion			
	Average velocity and speed			
	Instantaneous velocity and speed			
	Acceleration,equation for uniformly accelerated motion,Relative velocity			
	CHAPTER 4(MOTION IN PLANE)			
	Elementary concepts of differentiation and integration for describing motion.	Test of vectors(Numericals based)	CW: Numericls of NCERT and extra questions	To measure thickness of a given sheet by using screw gauge.
	Scalar and vector quantities: Position and displacement vectors,			
	general vectors and notation, equality		HW: Assignment of vectors	
	of vectors			
	Multiplication of vector by a real number			
	Addition and subtraction of vectors - graphical method			
		REVISION		
		N.P.based on instantaneous velocity;		
		N.P.based on Relative velocity.		
		UNIT TEST- I (24th July to 7 th Aug.)		
AUGUST	**CHAPTER 4(MOTION IN PLANE)**			To find the weight of a given of a given body,say a wooden block,using the parallelogram law
1--15	Unit vector,; Resolution of a vector in a plane			
(10days)	Rectangular components.	Test of motion in a plane(Based on conceptual questions and numericals)	CW:Questions of projectile motion	.
	Relative velocity in two dimension			

	Projectile motion		HW:Assignment of chapter	
	Uniform circular motion			
	CHAPTER5(LAWS OF MOTION)			
	Concept of force. Inertia			
	First law of motion; momentum			To make a paper scale of given least count .(o.2cm,)
	Newton's second law of motion;			
	Impulse; Newton's third law of motion.			
	Law of conservation of linear momentum and its applications.	Test of laws of motion	CW:Ncert questions and extra questions of laws of motion	To study relation between force of limiting friction and normal reaction.
	Equilibrium of concurrent forces. laws of friction, rolling friction.			To study dissipation energy of a simple pendulum by plotting a graph between square of
	laws of friction, rolling friction.			
	Static and kinetic friction		HW:Assignment of laws of motion	
	Dynamics of uniform circular motion:			
	Centripetal force,			
	Examples of circular motion (vehicle on level circular road, vehicle on banked road).			
		REVISION		
		N.P.based on Projectile motion,impulse,friction		
AUGUST	**Chapter 6**			
16--31	**(work ,energy and power)**			
(13 days)	introduction		CW:Questions related to chapter.	
	The work energy theorem			
	Work and kinetic energy	Test of work,energy and power.	HW: Assignment of chapter	Using a simple pendulum plot L-T graph . Hence find effective length of a second's pendulum using
	Work done by variable force			
	The work energy theorem by			
	variable force			

	The concept of potential energy			
	The conservation of mechanical			
	energy			
	The potential energy of aspring			
	Various form of energy			
	Power			
	Collision	**REVISION**		
		Numerical problems based on work energy theorm		
Sept	**CHAPTER 7(SYSTEM OF PARTICLE AND ROTATIONAL MOTION)**			
1--15	Introduction			
(10 days)	Centre of mass of a two-particle system			
	momentum conversation		CW: Numericals of centre of	
	centre of mass motion		mass and vector product	
	centre of mass of uniform rod.		HW;Questions of vector	
	Vector product of vectors		product	
	torque, angular momentum			
	conservation of angular momentum			
	Equilibrium of rigid bodies			
	Equations of rotational motion,		Assignment of chapter will	
			be given	
		Half Yearly 16 Sep to 1oct		
Oct.	**CHAPTER 7(SYSTEM OF PARTICLE AND ROTATIONAL MOTION)**			
(1--15)		Test of rotational motion(Derivation and numericals based)		
(06days)	comparison of linear and rotational motions			
	moment of inertia, radius of gyration.			
	Values of moments of inertia for			
Oct.	simple geometrical objects			

16-31	Statement of parallel and perpendicular axes			
(11 days)	theorems			
	CHAPTER 8(GRAVITATION)		Assignment of chapter will be given	
	Introduction			To find the spring constant of ahelical spring from the load extention graph.
	Kepler's law			
	The gravitation constant			
	Acceleration due to gravity of the earth			
	Acceleration due to gravity below and above the surface of earth.			
	Gravitation potential energy	Test of Gravitation		
	Escape speed	(Conceptual based)		
	Earth satellite.			
	Energy of an orbiting satellite			
	Geostationery and polar satellite			
	Weightlessness	**REVISION**	CW:Conceptual questions and numericls related to chapter	
		N.P.based on theorm of parallel and perpendicular		
		N.P.based on energy of satellite		
Nov	**CHAPTER9(MECHANICAL PROPERTIES OF SOLIDS)**	Test of solids and fluids		
1--15	Elastic behavior of solids			
(11days)	Stress and strain		HW:Assignment of chapter	To determine YOUNG'S modulus of the material of a given wire using searle's appartus.
	Hooke'slaw			
	Stress and strain curve			
	Elastic module.			
	Application of elastic behaviour of solids			
		Test of solids and fluids		
	Chapter 10(mechanical properties of fluid)			

	pressure			
	Pascal's law and its applications			
	(hydraulic lift and hydraulic brakes).			
	Effect of gravity on fluid pressure.			
	Viscosity, Stokes' law, terminal velocity			To observe and explain the effect of heat on a bimettalic strip
	Bernoulli's principle			
	streamline and turbulent flow			
	Reynold's number			
	Surface energy and surface tension		CW;Ncert questions of chapter	
	angle of contact			To determine the coefficient of viscosity of a given liquid by
	application of surface tension ideas to drops, bubbles and capillary rise		HW:Assignment of chapter	
Nov.	**Chapter11(Thermal properties of matter)**			
16-30	Introduction			
(13 days)	Temperature and heat			
	Measurement of temperature			To study the relation b/w temperature of a body and time by
	Ideal gas equation and absolute temperature.			
	Thermal expansion			
	Specific heat capacity			
	calorimeter			
	Change of state			
	Heat transfer			
	newton's law of cooling	**REVISION**		
		N.P.based on calorimeter,pascal's law,specific heat capacity.		
		UNIT TEST- II (16th Nov to 29 Nov)		
Dec.	**Chapter 12(Thermodynamics)**			

1--15	Introduction			
(11days)	Thermal equilibrium	Test of thermodynamics	CW:Numericals of laws of	
	Zeroth law of thermodynamics	MCQ	thermodynamics	
	Heat ,internal energy and work		HW:Assignment of chapter	
	First law of thermodynamics			
	Specific heat capacity			
	Thermodynamic process			
	Heat engine			
	Refrigerator and heat pump			
	Second law of thermodynamics			
Dec	**Chapter 13(Kinetic theory)**			To note the change in the level of liquid in a container heating and interpret the observation
16-31	Introduction			
(13 Days)	Kinetic theory of ideal gas			
	Law of equipartion of energy			
	Specific Heat capacitry	Test of kinetic theory of gases		
	Mean free path	**REVISION**		
		N.P. based on efficiency,coefficient of performance.		
		N.P. based on Specific heat and latent heat		
Jan	**Chapter 14(Oscillation)**			
16-31	Introduction		CW:Questions of NCERT and extra questions related to oscillation	Tostudy the relationship b/w frequency and length of a given under constant tension using
14days	Periodic and oscillatory motion			
	Simple harmonic motion			
	S.H.M and Uniform circular motion		HW:Numericals of oscillation	To determine speed of sound using resonance tube method.
	Velocity and Acceleration in S.H.M.			
	Force law inS.H.M			
	Energy in S.H.M.			

				To study the variation in volume with pressure for a sample of an air at constant temp. by plotting
	Some system executing S.H.M			
	Demped S.H.M.			
	Forced oscillation and resonance			
	CHAPTER15(WAVE)			
	Wave	Test of oscillation and waves	CW:Questions of waves	
	Transverse and longitudinal waves		HW:Assignment of oscillation and waves	
	Displacement relation in progressive waves			
	Speed of a travelling wave			
	The principle of superpostion			
	Reflection of wave			
	standing waves in strings and organ pipes			
	Beats			
	Doppler effect			
	Revision			
Feb	**Revision**	**Revision**		
1--15		Test of each chapter and difficulties of students will be discuss.		
(12 days)				
		Annual exam- Month of Feb Mar		

EXAM.	SYLLABUS
UT -1	Chapter 1,2,3
Half yearly	Chapter 1-5
UT - 2	Chapter 6,7,8
Annual Exam.	CompleteSyllabus