YEAR 12 A/ B –PHYSICS

WEEK 13 (22nd November to 26th November) (3 lessons)

Work sent to the students through: Google classroom / Zoom Learning Platform

Topic: Electrical circuits
Resources: Student text book, worksheet file, interactive power point from Board works and Online PHET simulations

Date	Class	Lesson	Lesson objectives & Learning outcomes	Mode of teaching	
22nd Nov Sunday **24th Nov Tuesday**	**12 A**	8 6	**Learning objectives:** Investigate the variation in drift velocity in conductors **Learning Outcomes :** Deduce the ratio of drift velocity in conductors of different materials connected in series. Deduce the ratio of drift velocity in conductors of different thicknesses connected in series. Solve numerical questions	**Zoom**	Teacher uses power point presentation, Phet simulations and breakout sessions for students to collaborate and attain the objectives
23rd Nov Monday **26th Nov Thursday**	**12 A** **12B**	1 3	**Learning objectives:** Determine the electric energy and power associated with an electrical circuit. **Learning Outcomes :** Use the expression $P = VI$ and $W = VIt$ to solve numerical problems Recognise and use the related expressions $P = I^2R$ and $P = V^2/R$ Explain efficiency and make calculations of it within the electrical circuits	**zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
23rd Nov Monday **26th Nov Thursday**	**12 A** **12B**	2 4	**Learning objectives:** Solve circuit problems involving series and parallel combination circuits of ohmic and non-ohmic conductors **Learning Outcomes:** Identify a variety of applications involving the parallel combinations of resistors. Complete Worksheet file questions	**GC**	Worksheet send in GC

YEAR 12 A/ B – PHYSICS

WEEK 13 - (22nd Nov to 26th Nov) - 3 lessons for both batches

Work sent to the students through: Whatsapp group / Google classroom / Zoom Learning Platform

Topic: 2.15 Newton's laws of motion

Resources: Student text book, worksheet file, interactive power point from Board works and Online animations

Date & Class	Lesson	Lesson objectives & Learning outcomes	Mode of teaching	
22nd Nov Sunday - **12 B** 24th Nov Tuesday - **12 A**	6 4	**L.O –** Draw and interpret free-body force diagrams to represent forces on a particle or on an extended but rigid body, using the concept of centre of gravity of an extended body **Learning outcomes-** • Describe the effects of a force on an object. • Identify the types of forces and their properties. • Draw free body force diagrams for different situations	**Zoom**	Teacher uses ppt and board works to explain force is needed to bring about **any** change in the motion of a moving object. Students should be able to draw FBFD showing all the forces acting on an object for various sitautions.
22nd Nov Sunday - **12 B** 26th Nov Thursday - **12 A**	7 1	**L.O –** Recall the relationship $F = ma$ and solve problems using it, appreciating that acceleration and resultant force are always in the same direction. **Learning outcomes-** • State Newton's second law of motion. • Define Newton. • Solve problems using the relationship: net force = mass × acceleration (F = ma) • Explain why a body moves with constant velocity if net force is zero. • **Discuss an experiment to investigate second law - use an air track to investigate factors affecting acceleration.**	**Zoom**	Assignment given: Plan an experiment to investigate second law - use an air track to investigate factors affecting acceleration. Predict the (a) relationship between force and acceleration, when mass is kept constant. (b) acceleration and mass, when force is kept constant.
25th Nov	3	**L.O –** Recall dynamic equilibrium and define terminal velocity.		Teacher uses ppt and board works, online

		Learning outcomes-		simulation to discuss
Wednesday - **12 B** 26th Nov Thursday - **12 A**	2	• Define terminal velocity. • Describe and explain motion of a sky diver. • Predict the variations in terminal velocity with size of the parachute, change in mass etc.	**Zoom**	various examples of objects attaining terminal velocity

HOMEWORK: Complete worksheet file questions (exam style questions)