YEAR 12 A/ B –PHYSICS

WEEK 12 (15th November to 19th 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	
15th Nov Sunday 17th Nov Tuesday	12 A	8 6	**Learning objectives:** Recognise, investigate and use the relationships between current, voltage and resistance for series circuits **Learning Outcomes :** Realise that current is same at all points in a series circuit. Realise that it is not possible to control one component in a series circuit. Derive the equation $R = R_1 + R_2 + R_3$ for resistors connected in series Do Question 1-3	**Zoom**	Teacher uses power point presentation, Phet simulations and breakout sessions for students to collaborate and attain the objectives
16th Nov Monday 19th Nov Thursday	12 A 12B	1 3	**Learning objectives:** Recognise, investigate and use the relationships between current, voltage and resistance for parallel circuits **Learning Outcomes :** Realise that voltage is same at across all resistors in a parallel circuit. Select and use the equation for the total resistance of two or more resistors in parallel. Derive the equation $1/R = 1/R_1 + 1/R_2 + 1/R_3$ for resistors connected in parallel Do Question 4-6	**zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives
16th Nov Monday 19th Nov Thursday	12 A 12B	2 4	**Learning objectives:** Recap all the objectives covered in lesson 1 and 2 series and parallel circuits **Learning Outcomes:** Discussion of the exam style questions from the worksheet given. Complete Worksheet file questions	**zoom**	Teacher uses breakout sessions and group discussions for students to collaborate and attain the objectives

YEAR 12 A/ B – PHYSICS

WEEK 12 - (15th Nov to 19th Nov) - 3 lessons for both batches

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

Topic: 2.18 Projectiles

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	
15th Nov Sunday - **12 B** 17th Nov Tuesday - **12 A**	6 4	**L.O** – Apply kinematics equations to projectile motion. Solve questions on projectile motion from worksheet file. **Learning outcomes-** • Apply the kinematics equations to objects projected horizontally and thrown at an angle. • Realise that in projectile questions, they need to be careful to use a consistent sign convention- upwards direction is taken as positive, so that the initial velocity will be positive and acceleration is negative.	**Zoom**	Students should be able to find for a projectile, the maximum height reached, the horizontal range of the motion, the angle of projection and the time taken to reach the ground again after projection. ***Research work given on projectile motion in sports and ballistics***
15th Nov Sunday - **12 B** 19th Nov Thursday - **12 A**	7 1	**L.O** – Understand that mass is the property of a body that resists change in motion. Recall Newton's laws of motion and use them to explain the acceleration of objects. **Learning outcomes-** • State Newton's first law. • Analyse forces acting on an object in static equilibrium under two or three forces. • Uses the fact that resultant of any two forces will be equal and opposite to the third in static equilibrium. • State Newton's second law of motion. • Explain why a body moves with constant velocity if net force is zero.	**Zoom**	Teacher uses ppt and board works that contains interactive questions and online simulation to explain Newton's laws of motion, Static equillibrium. Explain the concept of 'inertia' leads to the idea of the resistance of an object to changes in its state of rest or uniform motion
18th Nov Wednesday - **12 B**	3	**L.O** – Recall the relationship $F = ma$ and solve problems using it, appreciating that acceleration and resultant force are always in the same direction.		Instruction will be given in GC to complete the given

| 19th Nov Thursday - **12 A** | 2 | **Learning outcomes-**
• Plan an experiment to investigate second law - use an air track to investigate factors affecting acceleration.
• Predict the relationship between
    • force and acceleration, when mass is kept constant.
    • acceleration and mass, when force is kept constant.
• Solve problems using the relationship: net force = mass × acceleration (F = ma) | **GC** | worksheet
Students will complete the work sheet assigned for them in GC and turn in after completion
Yr 12 A will be having CAT 4 exam on Thursday |

HOMEWORK: Complete the textbook Qs: 1- 3, Page 28 and worksheet file questions