YEAR 12 A/ B –PHYSICS

WEEK 7 (11th October to 15th October) 3 lessons for both batches

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

Topic: Electrical quantities

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	
11th Oct Sunday **13th Oct** Tuesday	**12 A** **12 B**	8 6	**Learning objectives**: Assessment on solid materials **Learning Outcomes-** **Analyse** F- e graph & find spring constant Stress-strain graph -Young's Modulus &Energy density. Use the data from the YM experiment to draw an appropriate graph. Calculate YM from F- e graph Identify and describe the material properties. Sketch a stress-strain graph for brittle/ ductile material and label appropriately. Draw the F-e graph for rubber for loading and unloading cycle	**GC**	Teacher uses Google forms . Test will be assigned in GC to turn in the written work.
12th Oct Monday **15th Oct**	**12 A**	1	**Learning objectives:** Describe electric current as the rate of flow of charged particles and use the expression $I = \Delta Q / \Delta t$ Differentiate between ac and dc. **Learning Outcomes :** Explain that electric current in a metal is due to the movement of electrons/ electrolyte- due to the movement of ions Solve problems using the equation	**Zoom**	Teacher uses interactive power point presentation and breakout sessions for students to collaborate and attain the objectives.

Thursday	**12 B**	3	$Q = It$ and $\Delta Q = I\Delta t$ use $e = 1.6 \times 10^{-19}$ C Use the expression $Q = ne$ to solve numerical problems **Interpret the area under I-t graph as the total charge that passes.** Explain what is meant by conventional current and electron flow.		HW from worksheet file.
12th Oct Monday **15th Oct** Thursday	**12 A** **12 B**	2 4	**Learning objectives:** Define potential difference and; Use the expression V = W/Q **Learning Outcomes :** Define e.m.f. in terms of the energy transferred by a source in driving unit charge round a complete circuit Use the expression V = W/Q to solve **a few** numerical problems Differentiate between emf and potential difference Define volt Recognize that voltmeters are connected in parallel to measure voltage across a conductor & comparre with use of ammeters	**Zoom**	Teacher uses interactive power point presentation and breakout sessions for students to collaborate and attain the objectives.

YEAR 12 A/ B – PHYSICS

WEEK 7 (11th Oct to 15th Oct) - 3 lessons for both batches

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

Topic: 2.16 Kinematic equations

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	
11th Oct Sunday 13th Oct Tuesday	**12 B** **12 A**	6 4	**L.O –** Describe an experiment to determine the acceleration of free fall using a falling body **<u>CORE PRACTICAL 1:</u> *Determine the acceleration of a freely-falling object.*** **Learning outcomes-** • Plan an experiment to determine the acceleration of free fall of a falling body using trapdoor and electromagnet arrangement. • Identify the measurements to be taken and describe the procedure. • Choose the appropriate equation of motion to find g. • Use an appropriate graph to determine g.	**Zoom**	Students should be aware that the value of 'g' can be determined in several ways. With appropriate timing devices, they can carry out the expt using the direct method of timing the fall of an object through a measured height and using $s=\frac{1}{2}gt^2$. Alternatively, *g* can be found by using light gates & the equation $v^2 = u^2+2as$
11th Oct Sunday 15th Oct Thursday	**12 B** **12 A**	7 1	**L.O –** Solve problems using equations that represent uniformly accelerated motion in a straight line, including the motion of bodies falling in a uniform gravitational field without air resistance **Learning outcomes-** • Use the equations of motion for freely falling objects: $v = u - gt$ $s = ut - \frac{1}{2} gt^2$ $v^2 = u^2 – 2gs$	**Zoom**	Students solve the worksheet problems using the eqn of motion. Encourage them to use the value of $g = 9.81ms^{-2}$ Also to consider g as negative

14th Oct Wednesday 15th Oct Thursday	**12 B** **12 A**	3 2	**L.O :** Solve problems using equations that represent uniformly accelerated motion in a straight line, including the motion of bodies falling in a uniform gravitational field without air resistance. **Learning outcomes-** • Recall the kinematic equations for uniformly accelerated motion. • Recall the equations of motion for uniform acceleration and can apply them in calculations - involving motion in straight lines.	**Zoom**	Worksheets prepared in two levels to practise using the equations for uniform acceleration. Teacher will post the worksheet in the GC.