

YEAR 12 A/ B –PHYSICS

WEEK 6 (4th October to 8th October) 3 lessons for both batches

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

Topic: Solid Materials

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	
4 th Oct Sunday	12 A	8	<p>Learning objectives:</p> <p><u>Determine</u> Young's Modulus from stress-strain graphs</p> <p><u>Analyse the plan</u> from the last lesson to investigate the relation between stress and strain of a wire and hence determine the young's Modulus</p> <p>Learning Outcomes</p> <p>Identify the gradient of stress-strain graph as Young's Modulus and area under the graph as Energy density.</p> <p>Realise how to use the data collected from the YM experiment to draw an appropriate graph.</p> <p>At extension level; Calculate YM from F- e graph</p>	Zoom	<p>Teacher uses interactive power point presentation and breakout sessions for students to collaborate and attain the objectives.</p> <p>Work will be assigned in GC to turn in the graph work.</p>
6 th Oct Tuesday	12 B	6			
5 th Oct Monday	12 A	1	<p>Learning objectives:</p> <p>Discuss how the material properties such as stiffness, density, resistivity and strength relate to the microscopic structure of the material.</p> <p>Use the knowledge gained so far to sketch a stress-strain graph for brittle/ductile material and label appropriately.</p>	Zoom	<p>Teacher uses interactive power point presentation and breakout sessions for students to collaborate and attain the objectives.</p>
8 th Oct Thursday	12 B	3	<p>Learning Outcomes :</p> <p>Describe material behaviour based on</p>		<p>HW from worksheet file.</p>

			a stress–strain graph Sketch a stress–strain graph from descriptions of material properties Research the selection of materials for turbine blades/fishing rods etc		
5 th Oct Monday	12 A	2	Learning objectives: Extend the study to the material properties of rubber Learning Outcomes : Draw the F-e graph for rubber for loading and unloading cycle	Zoom	Teacher uses interactive power point presentation and breakout sessions for students to collaborate and attain the objectives.
8 th Oct Thursday	12 B	4	Be able to determine the energy stored in the rubber from the hysteresis loop.		

YEAR 12 A/ B – PHYSICS

WEEK 6 (4th Oct to 8th 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	
6 th Oct Tuesday	12 A	6	L.O – Assessment on Units, estimation, velocity and acceleration, motion graphs	Zoom	Assessment given in google form - 20 marks
7 th Oct Wednesday	12 B	4	Learning outcomes-		

			<ul style="list-style-type: none"> Assessing student's knowledge on different concepts of units, estimation, velocity and acceleration and motion graphs 		
4 th Oct Sunday	12 B	7	<p>L.O – Derive, from the definitions of velocity and acceleration, equations that represent uniformly accelerated motion in a straight line</p> <p>Learning outcomes-</p> <ul style="list-style-type: none"> Use the equations for uniformly accelerated motion in one dimension: $v = u + at$ $s = ut + \frac{1}{2} at^2$ $v^2 = u^2 + 2as$ Identify negative displacement, velocity and acceleration in different situations. 	Zoom	<p><i>Carried forward from previous week.</i></p> <p>Teacher uses interactive power point presentation to explain the concepts. Recall the eqns of uniform acceleration and can apply them in calculations involving motion in straight lines.</p>
8 th Oct Thursday	12 A	1			
7 th Oct Wednesday	12 B	3	<p>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.</p> <p>Learning outcomes-</p> <ul style="list-style-type: none"> Recall the kinematic equations for uniformly accelerated motion. Calculate unknown variables using the kinematics equations. 	GC	<p>Worksheet prepared in two levels to practise using the equations for uniform acceleration. Teacher will post the worksheet in the GC. Instruction will be given in the Google classroom to complete the Worksheet.</p>
8 th Oct Thursday	12 A	2			

