YEAR 13 A/ B –PHYSICS

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

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

Topic: Circular Motion & Thermodynamics

Date	Class & esson	Lesson objectives & Learning outcome	Mode of teaching	
5th Oct Monday **6th Oct** Tuesday	**13 B** - 6 **13 A** - 4	**Learning objectives**: Worksheet discussion on circular motion **Learning Outcomes** : Be able to identify the gaps in understanding the concepts. Revise the numerical formulas to calculate Centripetal force.	**Zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives.
5th Oct Monday **8th Oct** Thursday	**13 B** -7 **13 A - 1**	**Learning objectives**: Explain the concept of internal energy as the random distribution of potential and kinetic energy amongst molecules Explain the difference between heating and working **Learning Outcomes** : Define the internal energy of a material in terms of the KE and PE of its particles. Explain that thermal energy is transferred from a region of higher temperature to a region of lower temperature. Understand that regions of equal temperature are in thermal equilibrium.	**zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives.
7th Oct Wednesday **8th Oct** Thursday	**13 B** - 3 **13 A - 2**	**Learning objectives**: Describe how there is an absolute scale of temperature that does not depend on the property of any particular substance (the thermodynamic scale and the concept of absolute zero) **Learning Outcomes** : Convert temperatures measured in kelvin to degrees Celsius (or vice versa):	**Zoom & GC**	Teacher uses Google Classroom and breakout sessions in Zoom for students to collaborate and attain the

		T (K)= θ (°C) + 273.15. State that absolute zero is the temperature at which a substance has minimum internal energy.		objectives.

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Topic: - 7.2 - Capacitors

Resources: Student text book, interactive power point, Board works, worksheet file and online videos/animations

Date	Lesson	Lesson objectives & Learning outcome	Mode of teaching	
6th Oct Tuesday **- 13 A** 6th Oct Tuesday **- 13 B**	5 6	**L.O –** Assessment on the topic 7.1 Electric fields **Learning outcomes-** • Assessing student's knowledge on different concepts of nelectric fields.	**Zoom**	Assessment given in google form - 20 marks
5th Oct Monday **- 13 A** 8th Oct Thursday **- 13 B**	1 3	**L.O –** Investigate and recall that the growth and decay curves for resistor–capacitor circuits are exponential, and know the significance of the time constant RC **Learning outcomes-** • Describe the charging and discharging of a capacitor**.** • Sketch graphs that show the variation with time of potential difference, charge and current for a capacitor discharging through a resistor. • Define the time constant of a circuit Select and use time constant = CR	**Zoom**	Teacher uses boardworks & power point presentation to explain the concepts and guide students to understand the exponential decay process.
5th Oct Monday **- 13 A** 8th Oct Thursday	2 4	**L.O –** Recognise and use the expression $Q = Q_0 e^{-t/RC}$ and derive and use related expressions, for exponential discharge in RC circuits, for example, $I = Io\ e^{-t/RC}$ and $V = V_0\ e^{-t/RC}$	**Zoom**	Teacher uses boardworks & power point presentation to

- 13 B		**Learning outcomes-** • Derive and use the expressions for exponential discharge in RC circuits – $Q = Q_0 e^{-t/RC}$ $I = Io\ e^{-t/RC}$ and $V = Vo\ e^{-t/RC}$ • Discuss the factors that affect the time taken for a capacitor to discharge. • Plan an experiment to investigate discharging of a capacitor and predict the variation of Q, I and V for the capacitor. • Estimate the area under *I* - *t* curve as the total charge of a capacitor that is discharging.		explain the concepts and guide students to solve problems from worksheet file.