YEAR 13 A/ B –PHYSICS

WEEK 11 (8th November to 12th November) (3 lessons)

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

Topic: 11- Nuclear Radiation

Date	Class	Lesson	Lesson objectives & Learning outcome	Mode of teaching	
9th Nov Monday **10th Nov Tuesday**	**13 B** **13A**	**6** **4**	**Learning objectives**: Show an awareness of the existence and origin of background radiation, past and present Investigate and recognise nuclear radiations (alpha, beta and gamma) from their penetrating power and ionising ability **Learning Outcomes** : Describe the safety precautions necessary while experimenting with radioactivity. Measure background count rate from secondary data. Describe the nature, mass, charge, ionisation, penetration, energy, deflection in electric and magnetic fields and range of α-particles, β-particles and γ-rays.	**Zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives.
9th Nov Monday **12th Nov** Thursday	**13 B** **13A**	**7** **1**	**Learning objectives**: Describe the spontaneous and random nature of nuclear decay **Learning Outcomes** : Describes the N-Z stability graph with respect to stable and unstable elements. Identifies proton rich and neutron rich nuclides on the graph and predicts the type of emission. Illustrates each type of decays on the graph using arrows. Describe the changes in the original nucleus after alpha, beta minus and beta plus decay resulting in transmutations. Describes balancing nuclear equation for each decay.	**zoom**	Teacher uses power point presentation and breakout sessions for students to collaborate and attain the objectives.

11th Nov Wednesday **12th Nov** Thursday	**13 B** **13 A**	**3** **2**	**Learning objectives**: Describe the spontaneous and random nature of nuclear decay(contd) **Learning Outcomes** : Describes beta minus and beta plus decay in terms of the decay of neutrons and protons. Recognize changes in A and Z in decay processes and write hadron equations . Describes the evidences for the emission of neutrino/anti neutrino in beta decays. Explains the graph displaying the energy spectrum of beta particles. Realise that energy and momentum are not conserved in beta decays without neutrinos.	**zoom**	Teacher gives the assessment in Google forms.

YEAR 13 A/ B –PHYSICS

WEEK 11 (8th Nov to 12th Nov) - 3 lessons for both batches

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

Topic: - 7.3 – Magnetic fields

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

Date	Lesson	Lesson objectives & Learning outcome	Mode of teaching	
9th Nov Monday **- 13 A** 10th Nov Tuesday **- 13 B**	1 6	*Carried forward from last week* **L.O –** Demonstrate the force on a current-carrying conductor in a magnetic field. **Learning outcomes-** • Discuss the factors that alter the magnitude and direction of the force. • Plan an experiment with electronic balance to investigate $F = BIl$ • Interpret the gradient of *F-I*, *F-B* and *F-l* graphs. • Predict the variation of force when the conductor is parallel and perpendicular to the field lines. • Use the expression $F = BIl \sin \theta$ and apply Fleming's left hand rule to current carrying conductors in a magnetic fields.	**Zoom**	Teacher uses online/ virtual expts to demonstrate the the factors affecting the force on a current-carrying conductor in a magnetic field. The angle θ must be recognised as the angle between the magnetic field and the current direction.
9th Nov Monday **- 13 A** 12th Nov Thursday **- 13 B**	2 3	**L.O –** Explain the forces between current carrying conductors and predict the direction of the forces **Learning outcomes-** • Understand the forces between two wires with the current flowing the same way and then opposite ways. • Apply Fleming's left hand rule to explain the attraction and repulsion that result.	**Zoom**	Students draw the magnetic field around the two wires with the current flowing the same way and then opposite ways. Use Fleming's left hand rule to explain the attraction and repulsion that result.
10th Nov Tuesday **- 13 A**	5	**Learning Objective:** Recognise and use the expression $F = Bqv \sin \theta$ and apply Fleming's left hand rule to charged particles moving in a magnetic field	**Zoom**	Teacher uses power point presentation and simulations to

12th Nov Thursday **- 13 B**	4	**Learning Outcome:** • Recognize the effect of magnetic field on charges moving through a magnetic field. • Realise that a moving charge is equivalent to a current whose direction is determined by the type of charge. • Use the expression $F = Bqv \sin \theta$ and apply Fleming's left hand rule to charges moving through a magnetic field.		explain the concepts to attain the objectives.

HOMEWORK: Complete the textbook Qs: Page 65, 67 and worksheet file questions