GES A2 Physics Term 1 (Sept-Oct, 2019-20)

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| TOPIC: Motion and Electric Fields |

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| Theme: Identify and explain the applications of circular motion and electric fields | Level: 13 |
| Objectives: To investigate the features of momentum, circular motion and electric fields. | |

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| Focussing Questions | Key Words | |
| 1. How can momentum be used to explain motion?    1. Explaining Newtons Second Law in terms of momentum    2. Explaining the importance of impulse    3. Calculating the final velocity of objects    4. Analysing collisions to determine if they are elastic or inelastic 2. What is circular motion?    1. Explaining that objects in circular motion accelerate towards the centre of the circle and experience a resultant force    2. Calculating the angular velocity, linear velocity and resultant force    3. Analysing situations to determine the maximum speed possible for circular motion to continue 3. What are electric field?    1. Draw electric fields around positive and negative point charges    2. Draw the electric field between two uniform parallel plates    3. Define electric field strength    4. Calculate the electric field strength between two parallel plates and around a point charge    5. Define coulombs law    6. Calculate the electric force between two point charges    7. Define Electric Potential    8. Calculate the electric potential around a point charge   Assessment Textbook questions  Collection, and interpretation, of data  End of unit test constructed from past paper questions | Momentum  Velocity  Impulse  Time  Resultant force  Collision  Kinetic energy  Elastic  Inelastic  Circular motion  Acceleration  Angular velocity  Linear velocity  Centripetal force  Radius  Electric field  Point charge  Parallel plates  Electric field strength  Electric force  Attraction  Repulsion  Coulombs law  Electric potential | Explaining words  The velocity of an object can be calculated by….  The kinetic energy of an object is the description of….  Acceleration of an object is the calculation of….  The forces on an object in circular motion are…..  The charge around electrical potential can be calculated by…  Newton’s Second Law affects an objects motion by….  Electric field strength is defined by….  Collisions of an objects can be affected by…. |

**Text Book: departmental textbooks and worksheets**