

**CBSE Class 11 Physics**  
**Practice Paper**  
**Chapter-8 (Gravitation)**

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**Long Answer Type Question (5 Marks)**

1. What is acceleration due to gravity? Obtain relations to show how the value of 'g' changes with (i) altitude (ii) depth
2. Define escape velocity obtain an expression for escape velocity of a body from the surface of earth? Does the escape Velocity depend on (i) location from where it is projected (ii) the height of the location from where the body is launched.
3. State Kepler's three laws of planetary motion. Prove the second and third law.
4. Derive expression for the orbital velocity of a satellite and its time period. What is a geostationary satellite. Obtain the expression for the height of the geostationary satellite.
5. State universal law of gravitation. Explain briefly how Newton discovered the universal law of gravitation.
6. Define the term gravitational potential energy. Is it a scalar or vector? Derive an expression for the gravitational potential energy at a point in the gravitational field of earth.