SHARJAH INDIAN SCHOOL, SHARJAH

Class: XI (Boy's Wing)

Subject: PHYSICS Worksheet -6

UNIT VI (GRAVITATION)

1. Two satellites of masses m & 2m are moving around the earth in circular orbits of same radius. Their time periods of revolution are in the ratio
   (a)1:1 (b)1:4 (c)2:1 (d)1:2
2. When a planet moves around the sun,
   (a)angular speed remains constant (b)linear speed remains constant
   (c) angular momentum remains constant (d)linear momentum remains constant
3. A body is taken from equator to the poles, its weight
   (a)remains the same (b)increases
   (c)decreases (d)increases at North pole & decreases at South pole
4. The increase in gravitational potential energy of an object of mass m raised from the surface of Earth to a height equal to the radius R of Earth is
   (a)mgR (b)$\frac{mgR}{2}$
   (c) $\frac{mgR}{3}$ (d) $\frac{mgR}{4}$
5. The mass of a planet is 6 times that of Earth & radius twice that of Earth. If the escape velocity from Earth is v, then escape velocity from the planet is
   (a)√3v (b))√2v (c))$\sqrt{5}$ v (d) v
6. At what height above the surface of the Earth of radius R acceleration due to gravity becomes 1% of that on its surface.
7. Find the ratio of acceleration due to gravity of two planets if their radii are in the ratio 1:2 & their
   (i)mass remains the same.
   (ii)material remains the same.