Lecture Sheet: 02

Science (Chapter-07: The Earth and Gravitation)

Class: VIII

Name of the student: .....Date: 20/09/2020

Gravity:

The accelerating force due to the earth on any object near to it, is called **gravity.**

Acceleration:

Acceleration is the rate of change of the velocity of an object with respect to time.

- The unit of acceleration = ms^{-2} or m/s^2

Let, the initial velocity of a car be 'u' and after 't' time the velocity be 'v'.

The change of velocity = v - u

The rate of change of velocity = $\frac{v-u}{t}$

Acceleration, $a = \frac{v-u}{t}$

Q. If the initial velocity of your car is 10 ms^{-1} and after 10 seconds the velocity is 15 ms^{-1}, what will be acceleration of your car?

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Q. If the initial velocity of your car is $7ms^{-1}$ and acceleration is $2ms^{-2}$, what will be the final velocity of your car after 5 seconds?

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Acceleration due gravity:

The rate at which the velocity of a free falling body change due to the force of gravity is called the acceleration due to gravity.

- Acceleration due to gravity is denoted by 'g'.
- The unit of acceleration due to gravity is ms^{-2} or m/s^2.
- At the equator the value of 'g' is $9.78m/s^2$.
- The value of g in the polar region is $9.832m/s^2$.

Q. What do you mean by the value of 'g' $9.8ms^{-2}$?

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