SHREE RAM SINGH GLOBAL SCHOOL
SUBJECT- PHYSICS
CLASS-IX
QUESTION BANK

Gravitation worksheet.

1)) The gravitational force between two objects is F. If masses of both the objects are halved without altering the distance between them, then the gravitational force would become

a) f/4
b) f/2
c) f
d) 2f

2) In which region of earth the weight of a body is slightly greater?

a) At Polar region
b) At equator
c) Tropic of Cancer or Tropic of Capricorn
d) None of these

3) Gravitational force of attraction between satellite and Earth provides necessary

a) Centrifugal force
b) Centripetal force
c) Dynamic force
d) Translatory force

4) Point where entire weight of an object acts is

a) Edge
b) Center of gravity
c) Central point
d) Can be anywhere in body

Question 5 to 7 Are Assertion and Reasoning based Questions

a) Both Assertion and Reason are correct, and reason is the correct explanation for assertion.

b) Both Assertion and Reason are correct, and Reason is not the correct explanation for Assertion.

c) Assertion is true but Reason is false.

d) Both Assertion and Reason are false

5) Assertion: Any two objects in the universe attract each other by a force called gravitation force.

Reason: The force of gravitation exerted by the earth is called gravity.

6) Assertion-In the absence of gravitational force any abject can be float on the sky.

Reason-gravitational force is the attractive force which exert from the core of earth.

7) Assertion: Weight of a body on earth is equal to the force with which the body is attracted towards the earth.

Reason: Weight of a body is independent of the mass of the body.

8) How is gravitation different from gravity?
9) Suppose gravity of earth suddenly becomes zero, then which direction will the moon begin to move if no other celestial body affects it?
10) How does the force of attraction between the two bodies depend upon their masses and distance between them?
11) A student thought that two bricks tied together would fall faster than a single one under the action of gravity. Do you agree with his hypothesis or not? Comment
12) The edge of a drawing pin is sharp and pointed one. Why?
13) What is the force of buoyancy?
14) A force of 15 N is uniformly distributed over an area of 150 cm^2. Find the pressure in pascals.
15) A force of 100 N is applied on an object of area 2 m^2. Calculate the pressure.
16) What do you mean by acceleration due to gravity?
17) **Case Study based questions**

Archimedes' principle, stated as follows: When a body is immersed fully or partially in a fluid, it experiences an upward force that is equal to the weight of the fluid displaced by it. The upward force is known as up thrust or buoyant force. In fact, all objects experience a force of buoyancy when they are immersed in a fluid. The magnitude of this buoyant force depends on the density of the fluid. Objects having density less than that of the liquid in which they are immersed float on the surface of the liquid. If the density of the object is more than the density of the liquid in which it is immersed then it sinks in the liquid. Hence body will float or sink depends upon difference between density of body and fluid.

(i)The up thrust of the body is equal to the

a) Mass of liquid
b) Weight of liquid
c) Weight of liquid displaced by body
d) None of these

(ii) If the density of the object is more than the density of the liquid in which it is immersed

then a) It sinks in liquid

b) It floats on liquid
c) It comes out of liquid
d) None of these

(iii) When anybody immersed in liquid it experience a force called as

a) Gravitational force
b) Buoyancy force
c) Nuclear force
d) None of these

(iv) State Archimedes' principle.

(v) Why does cube of plastic released deep down under the water come up to surface of water?

18) The earth is acted upon by gravitation of sun, even though it does not fall into the sun. Why?