



SHREE RAM SINGH GLOBAL SCHOOL
SUBJECT- PHYSICS
CLASS-IX
ANSWER KEY

1. $F/4$
2. At Polar region
3. Centripetal force
4. Center of gravity
5. a
6. a
7. c
8. Gravitation is the attractive force existing between any two objects that have mass. The force of gravitation pulls objects together. Gravity is the gravitational force that occurs between the earth and other bodies. Gravity is the force acting to pull objects toward the earth.
9. The moon will begin to move in a straight line in the direction in which it was moving at that instant because the circular motion of moon is due to centripetal force provided by the gravitational force of the earth.
10. According to Newton's law of gravitation, the force of attraction is directly proportional to their masses and inversely proportional to the square of the distance between the two object
$$F = Gm_1m_2 / R^2$$
 where G is Gravitational constant .
11. If two bricks tied together would not fall faster than a single one under the action of gravity. As the value of gravitational acceleration(g) Does not depend on the mass of the falling objects. So, two bricks tied together would reach the ground at the same time as the single brick under gravity if there is no air resistance.
12. Drawing pins have thin and pointed surface area because the less surface area generates more pressure on the tip of the drawing pins making it making it much easier to push into the surface.
13. The upward force of a liquid exerts on the object is called the force of buoyancy.
14. $F = 15 \text{ N}$

$$A = 150 \text{ cm}^2$$

$$P = \frac{F}{A} = \frac{15 \text{ N}}{150 \times 10^{-4}} = 1000 \text{ Pa}$$

15. 50 Pa

16) When an object falls freely towards the surface of earth from a certain height, then its velocity changes and this change in velocity produces acceleration in the object which is known as acceleration due to gravity denoted by g .

17) i) c

ii) a

iii) c)

(iv) 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.

(v) Cube of plastic released deep down under the water comes up to surface of water because it has less density than that of water also it experiences upward buoyancy force on it due to liquid.

18) Earth does not fall into Sun because earth keeps revolving around Sun. This creates a centripetal force that pulls earth away from the Sun. When this force is equal to the gravitational attraction, earth becomes stable.