1. Newton's law of gravitation is valid (a) on the earth only (b) on the moon only (c) in the laboratory only. (d) everywhere
2. What happens to the acceleration due to gravity with the increase in altitude from the surface of the earth?(a) Increases(b) Decreases(c) First decreases and then increases(d) Remains same
3. The weight of a body is 120 N on the earth. If it is taken to the moon, its weight will be about (a) 120 N (b) 60 N (c) 20 N (d) 720 N
4. The mass of a body is increased 4 fold and mass of other body is increased 16 fold. How should the distance between them be changed to keep the same gravitational force between them?
    (a) 4 times (b) 41 times (c) 8 times (d) 81 times
5. The unit of g/G is _____
6. Assertion : During a journey from the earth to the moon and back, maximum fuel is spent to overcome the earth's gravity at take off.Reason : Earth's mass is much greater than that of the moon.
7. Assertion : When distance between two bodies is doubled and also mass of each body is doubled, then the gravitational force between them remains the same.
   Reason : According to Newton's law of gravitation, product of force is directly proportional to the product mass of bodies and inversely proportional to square of the distance between them.
8. Assertion : The value of the acceleration due to gravity g on earth depends upon the average density of the earth.
   Reason : It is the radius of the earth which determines the value of the g .
9. Assertion : An object floats on the surface of a liquid in a beaker. The whole system is allowed to fall freely under gravity. The upthrust on the object due to the liquid is equal to the weight of the liquid displaced.
   Reason : Archimedes' principle states that the upthrust on an object due to a fluid is equal to the weight of the fluid displaced
10. A cannon after firing recoils due to
(a) conservation of energy
(b) backward thrust of gases produced
(c) Newton's third law of motion
(d) Newton's first law of motion
11. A man getting down a running bus, falls forward because
(a) due to inertia of rest, road is left behind and man reaches forward
(b) due to inertia of motion upper part of body continues to be in motion in forward direction while feet come to rest as soon as they touch the

road
(c) he leans forward as a matter of habit.
(d) of the combined effect of al the three factors
stated in (a), (b) and (c

12. Assertion : A quick collision between two bodies is
more violent than a slow collision, even when the
initial and the final velocities are identical.
Reason : Because the rate of change of momentum
which determines the force is greater in the first case.

13. Assertion : Newton's third law applies to all types of
forces. e.g. gravitational, electric or magnetic forces
etc.
Reason : Newton's third law of motion is applicable
only when bodies are in motion.

14. Assertion : When we sit on a chair, our body exerts a
force downward and that chair needs to exert an equal
force upward or the chair will collapse.
Reason : The third law says that for every action
there is an equal and opposite reaction.

15. If a body moves with uniform velocity, then the
acceleration is equal to (a) zero (b) constant(c) finite (d) infinite
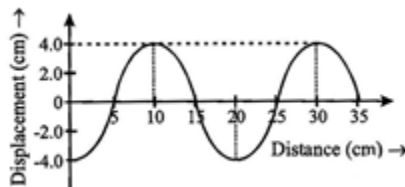
16.
Find wavelength,amplitude and frequency.

17.a) State the factors on which the pitch of a sound depends.
B)a stone is thrown from a height of 500 m in a pond .Find the time taken in which sound
Reaches to ears of thrower.speed of sound is 340m/s and g=10m/S2

18.If a net force of 7 N was constantly applied on 400 g object at rest, how long will it
take to raise its velocity to 80 m/s?

19. An object dropped from a cliff falls with a constant acceleration of 10 m/s^2. Find its
speed 5 s after it was dropped.

20. A solid weighs 50N in air(where as 44 N when completely immersed in water.
Calculate:
a.the upthrust b.the volume of the solid c the relative density of the solid Given Density
of water=1000kg/m3