

**Ch – 10 : Gravitation**

Question 1.  
What will happen to the gravitational force between two bodies if the masses of one body is doubled?  
Answer:  
If the mass of one body is doubled, force is also doubled.

Question 2.  
Why is ‘G’ called the universal gravitational constant?  
Answer:  
The constant ‘G’ is universal because it is independent of the nature and sizes of bodies, the space where they are kept and at the time at which the force is considered.

Question 3.  
Who formulated the universal law of gravitation?  
Answer:  
Isaac Newton

Question 4.  
How is gravitation different from gravity?  
Answer:  
Gravitation is the force of attraction between any two bodies while gravity refers to attraction between any body and the earth.

Question 5.  
What does a small value of G indicate?  
Answer:  
A small value of G indicates that the force of gravitational attraction between two ordinary sized objects is a very weak force.

Question 6.  
At what place on the earth’s surface is the weight of a body maximum?  
Answer:  
At the poles.

Question 7.  
At what place on the earth’s surface is the weight of a body minimum?  
Answer:  
At the equator.

Question 8.  
If the mass of a body is 9.8 kg on the earth, what would be its mass on the moon?  
Answer:  
It will remain the same on the moon, i.e., 9.8 kg.

Question 9.  
Do fluids possess weight?  
Answer:  
Yes, fluids have weight.

Question 10.  
Why can one jump higher on the surface of the moon than on the earth?  
Answer:  
Because the value of acceleration due to gravity (g) on the moon’s surface is nearly l/6th to that of the surface of the earth.

Question 11.  
Define the standard kilogram.  
Answer:  
The standard kilogram is the mass of a block of a platinum alloy kept at the international bureau of weights and measures near Paris in France.

Question 12.  
If the earth attracts two objects with equal force, can we say that their masses must be equal?  
Answer: No

Question 13.  
Is weight a force?  
Answer:  
Yes.

Question 14.  
What keeps the moon in uniform circular motion around the earth?  
Answer:  
Gravitational force between moon and the earth keeps moon in uniform circular motion around the earth.