



**RAMAGYA SCHOOL, NOIDA**  
IX/SCIENCE/2017-18  
OLYMPIAD PRACTICE WORKSHEET

Tick the correct option

1. What is the value of gravitational constant?

1.  $6.6734 \times 10^{-11} \text{ N m}^2/\text{kg}^2$
2.  $6.6734 \times 10^{-10} \text{ N m}^2/\text{kg}^2$
3.  $6.6734 \times 10^{-11} \text{ N m}/\text{kg}^2$
4.  $6.6734 \times 10^{-11} \text{ N m}^2/\text{kg}$

2. If the distance between two bodies is doubled, the force of attraction  $F$  between them will be \_\_\_\_\_

1.  $1/4 F$
2.  $2 F$
3.  $1/2 F$
4.  $F$

3. The force of gravitation between two bodies in the universe does not depend on

1. the distance between them
2. the product of their masses
3. the sum of their masses
4. the gravitational constant

4. Name the fundamental force which holds the planets in their orbits around the sun.

1. Gravitational force of attraction
2. Electrostatic static force of attraction
3. Nuclear force of attraction
4. Electro static force of attraction

5. When an object is thrown up, the force of gravity \_\_\_\_\_.

1. is opposite to the direction of motion
2. is in the same direction as the direction of motion
3. becomes zero at the highest point
4. increases as it rises up

6. What is the final velocity of a body moving against gravity when it attains the maximum height?

1. Zero

2.  $\frac{u^2}{2g}$

3.  $\frac{h}{t}$

4.  $2gh$

7. A stone is dropped from a cliff. Its speed after it has fallen 100 m is

1. 9.8 m/s

2. 44.2 m/s

3. 19.6 m/s

4. 98 m/s

8. A ball is thrown up and attains a maximum height of 100 m. Its initial speed was

1. 9.8 m/s

2. 44.2 m/s

3. 19.6 m/s

4. 98 m/s

9. A stone dropped from the roof of a building takes 4 seconds to reach the ground. What is the height of the building?

1. 19.6 m

2. 39.2 m

3. 156.8 m

4. 78.4 m

10. The acceleration due to gravity is zero at \_\_\_\_\_.

1. the equator

2. Poles

3. sea level

4. the centre of the earth

11. If acceleration due to gravity on earth is  $10 \text{ m/s}^2$  then, the acceleration due to gravity on moon is \_\_\_\_\_.

1.  $1.66 \text{ m/s}^2$

2.  $16.6 \text{ m/s}^2$

3.  $10 \text{ m/s}^2$

4.  $0.166 \text{ m/s}^2$

12. The second equation of motion for a freely falling body starting from rest is \_\_\_\_\_.

1.  $h = ut + \frac{1}{2}gt^2$

2.  $h = ut - \frac{1}{2}gt^2$

3.  $h = \frac{1}{2}gt^2$

4.  $h = -\frac{1}{2}gt^2$

13. The acceleration due to gravity of a body moving against gravity is

1.  $9.8 \text{ m/s}^2$

2.  $-9.8 \text{ m/s}^2$

3.  $\pm 9.8 \text{ m/s}^2$

4.  $9.6 \text{ m/s}$

14. Which of the following is not a mixture?

1. Blood

2. Silver coins

3. Saliva

4. Plutonium

15. Which are the two types of tissues?

1. Meristematic and permanent

2. Meristematic and temporary

3. Meristems and temporary

4. None of the above

16. Parenchyma is a type of \_\_\_\_\_.

1. complex tissue

2. simple tissue

3. xylem

4. phloem

17. Parenchyma: Simple::Phloem: \_\_\_\_\_.

1. Simple

2. Collenchyma

3. Complex

4. Xylem

18. A mixture of oil and water is an example of \_\_\_\_\_.

1. compound
2. two elements
3. mixture
4. true solution

19. A mixture of mercury and copper is an example of \_\_\_\_\_.

1. solid and solid
2. liquid and solid
3. solid and liquid
4. liquid and liquid

20. Which of these elements is not a metalloid?

1. Tungsten
2. Germanium
3. Bismuth
4. Antimony