

CHAPTER-9 | Gravitation

QUIZ
PART-06

1. What happens to gravitational force when distance is halved?

- A. Same
- B. Twice
- C. Four times
- D. Weaker (C)

Explanation: Force becomes four times stronger.

2. Why doesn't a heavy object fall faster?

- A. Weaker force
- B. Same acceleration
- C. Less mass
- D. Air resistance (B)

Explanation: Same acceleration due to gravity.

3. Force between Earth and 1 kg object?

- A. 9.8 N
- B. 10 N
- C. 6.7 N
- D. 1 N (A)

Explanation: The force is 9.8 N.

4. Do Earth and Moon attract each other equally?

- A. Yes
- B. Earth stronger
- C. Moon stronger
- D. Not equal (A)

Explanation: Equal and opposite forces.

5. Why doesn't Earth move towards the Moon?

- A. Earth is heavier
- B. Moon has more force
- C. Weaker pull
- D. No force (A)

Explanation: Earth's larger mass results in smaller acceleration.

6. What happens if one object's mass is doubled?

- A. Force halves
- B. Force doubles
- C. Force quadruples
- D. No change (B)

Explanation: Force doubles.

7. What happens if distance is doubled?

- A. Force one-fourth
- B. Force doubles
- C. Force halves
- D. No change (A)

Explanation: Force becomes one-fourth.

8. What does the universal law of gravitation explain?

- A. Planetary movement
- B. Attraction between objects
- C. Free fall
- D. Only planets (B)

Explanation: It explains attraction between objects.

9. What is the acceleration due to free fall?

- A. 9.8 m/s²
- B. 10 m/s²
- C. 5 m/s²
- D. 15 m/s² (A)

Explanation: 9.8 m/s².

10. Gravitational force between Earth and an object is called?

- A. Weight
- B. Mass
- C. Pull
- D. Buoyancy (A)

Explanation: It's called weight.