

Class: 9
Subject: Physics
Topic: Gravitation
No. of Questions: 19

- Q1. When we move from the poles to the equator. Hence, the value of 'g' decrease. Why
- Q2. What is the difference between centrifugal force and centripetal force?
- Q3. Explain: Centrifugal force and Centripetal force?
- Q4. An astronaut has 80 kg mass on earth (a) What is his weight on earth? (b) What will be his mass and weight on Mars where $g = 3.7 \text{ m/s}^2$
- Q5. A certain particle has a weight of 30 N at a place where the acceleration due to gravity is 9.8 m/s^2
- (a) What are its mass and weight at a place where acceleration due to gravity is 3.5 m/s^2
- (b) What are its mass and weight at a place where acceleration due to gravity is 0
- Q6. What is the difference between gravity and gravitation?
- Q7. Two bodies of mass 10 kg and 12 kg are falling freely. What is the acceleration produced in the bodies due to force of gravity?
- Q8. What will happen to the force of gravitation between two objects A and B if the distance them is reduced to half?
- Q9. What are the Kepler's laws of motions?
10. What are these (i) Product Rule (ii) Inverse square rule (iii) Universal gravitational constant (iv) Universal law of gravitation?
- Q11. What will happen to the force of gravitation between two objects A and B if the mass of the object A is doubled?
- Q12. Show that universal gravitational constant is nothing but force of gravitation between two unit masses separated by unit distance.
- Q13. A boy drops a stone from a cliff, which the ground in 20 seconds, Calculate the height of the cliff.
- Q14. The gravitational force acts on all objects in proportion to their masses. Why. Then, a heavy object does not fall faster than a light object?

- Q15. The earth and the moon are attracted to each other by gravitational force. Does the earth attract the moon with a force that is greater or smaller or the same as the force with which the moon attracts the earth? Why?
- Q16. If the moon attracts the earth, why does the earth not move towards the moon?
- Q17. What is the importance of Universal Law of Gravitation?
- Q18. What is Gravitation?
- Q19. What is Centripetal force?

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