

Chapter Test 13

Name _____

Part 1 Multiple Choice

Write the letter of the best response on the space provided.

1. ____ If you flew from Earth to the moon, which would occur?
 - a. Your weight would increase, but your mass would decrease.
 - b. Your weight would decrease, but your mass would increase.
 - c. Both your weight and your mass would decrease.
 - d. Your weight would decrease, and your mass would remain the same.
2. ____ The force of attraction between two objects is called
 - a. mass
 - b. motion
 - c. weight
 - d. gravity
3. ____ What is the best definition of *force*?
 - a. kilogram
 - b. mass and weight
 - c. any push or pull against an object
 - d. anything that slows motion
4. ____ Which are types of forces in the universe?
 - a. electricity, muscle power, elastic action
 - b. gravity, mass, newtons
 - c. weight, mass, atomic power
 - d. machine power, friction, weight
5. ____ What must be known to predict how much gravitational pull two objects have on each other?
 - a. weight and distance from each other
 - b. electrical charge and mass
 - c. mass and distance from each other
 - d. age, weight, and mass
6. ____ Why are people on Earth not pulled into the sun?
 - a. The sun's gravity is weaker than Earth's gravity
 - b. Earth's gravity is weaker than the sun's gravity, but people are much closer to Earth
 - c. The gravity of Earth and sun cancel out each other.
 - d. People are too small to be attracted by the sun's gravity.
7. ____ What must be true for an object to balance?
 - a. The balance point must be exactly in the center of the object.
 - b. The mass must be distributed equally on both sides of the balance point.
 - c. The object must be located some distance from the center of gravity.
 - d. The balance point must be located some distance from the center of gravity.
8. ____ Why would a heavy chair on wheels be easier to push across the floor than a lighter chair without wheels?
 - a. The wheels help gravity pull the heavier chair along.
 - b. The wheels eliminate the friction acting on the heavier chair.
 - c. The wheels increase the static force of the heavier chair.
 - d. The wheels decrease the friction normally present between the heavier chair and the floor.
9. ____ Which would best exert an elastic force?
 - a. kite string
 - b. rope
 - c. sprinkler
 - d. chewing gum
10. ____ Where is the word *newtons* used in a discussion of force?
 - a. In defining gravity
 - b. In measuring force
 - c. In discussing balancing
 - d. In explaining the difference between atomic and nuclear force

Chapter Test 13 (Cont.)

Name _____

11. ____ What type of friction is involved in earthquakes?
 a. rolling friction c. static friction
 b. nuclear d. sliding friction
12. ____ Why can a large rock balance on a very small surface?
 a. attraction between electrons and protons
 b. the weight is evenly distributed over the balance point
 c. the mass of the rock is greater than the mass of the surface
 d. none of these
13. ____ Compare the gravitational pull of Earth with that of the moon.
 a. Earth's pull is less than that of the moon.
 b. Earth's gravitation is six times that of the moon.
 c. the moon's pull is greater than the mass of Earth.
 d. Earth gravitation is one-sixth that of the moon.
14. ____ Which force can easily be reduced by putting oil between the two surfaces?
 a. elastic c. atomic
 b. electrical d. friction

Part 2 Matching

Match the word with its definition or description. Write the number of the best response on the blank provided.

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| 15. ____ force of attraction between electrons and protons | a. elastic force |
| 16. ____ created when objects are compressed | b. electrical force |
| 17. ____ force that resists momentum of an object | c. friction |
| 18. ____ holds together protons in the nucleus | d. gravity |
| 19. ____ sweeping a floor is an example of this force | e. magnetic force |
| 20. ____ is the attraction between two objects | f. mechanical force |
| 21. ____ occurs only between two magnetic objects | g. nuclear force of an atom |

Part 3 Short Answer and Essay

Answer each question using complete sentences.

22. Give three examples of times you may want to increase friction.
23. Compare electrical force with magnetic force.
24. What is the difference between mass and weight?