

Ch 12 Study Guide

Name _____

1. Define:

Force–

Newton–

Net Force–

2. How do forces affect the motion of an object?

3. Describe how the wind is an example of a force.

4. Use “tug of war” to explain balanced and unbalance forces.

5. Define and give an example of each:

Friction–

Example–

Static friction–

Example–

Sliding friction–

Example-

Rolling friction-

Example-

Fluid friction-

Example-

6. How do ball bearings reduced friction in machinery?

7. What is air resistance?

8. Define gravity-

9. What forces affect the motion of a dollar bill dropped from the top of a tall building?

10. How does earth's gravity affect objects near its surface?

11. What is terminal velocity?

12. Describe projectile motion.

13. Define and give an example of each:

Newton's First Law of Motion–

Example–

Inertia–

Newton's Second Law of Motion–

Example–

Mass–

14. An automobile with a mass of 2000 Kg accelerates when the traffic light turns green. If the net force on the car is 5000 N what is the car's acceleration?

15. How is mass different from weight?

16. What is your weight on earth? _____

What would you weigh on the moon? _____

17. Define and give an example:

Newton's Third Law of Motion–

Example–

18. Why don't action and reaction forces cancel each other out?

19. State in your own words the formula for momentum:

20. What is a necessary condition for the conservation of momentum?

21. If an eagle and a bumblebee are traveling at 8 km/hr, which has more momentum? **Explain**

22. Which universal force can repel as well as attract?

23. Which universal force acts to hold the nucleus together?

24. State in your own words what is meant by Newton's law of universal gravitation?

25. How does friction with the atmosphere affect the speed of an artificial satellite?

26. The moon in its orbit around the Earth behaves like a ball at the end of a string being swung above your head. Explain the forces involved.

27. If the speed of an orbiting satellite decreases, how might you expect its orbit to change?

28. Explain why there are two high and two low tides per day on Earth.