HPS Forces Review 2020                        Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per \_\_\_\_\_

OBJECTIVES: 3-5

\_\_\_\_\_ 1. An object with more mass will have more.

a. weight c. inertia

 b. acceleration d. force

\_\_\_\_\_ 2. The relationship among mass, force, and acceleration is explained by.

a. Newton’s first law of motion c. Newton’s third law of motion

 b. Newton’s second law of motion d. the conservation of momentum

\_\_\_\_\_ 3. A feather will fall through the air more slowly than a brick because of

a. gravity b. air resistance c. terminal velocity d. momentum

\_\_\_\_\_ 4. In the absence of air (in a vacuum), a hammer and a feather dropped from the same height will

 a. fall at different rates c. fall at the same rates

 b. float d. not have momentum

\_\_\_\_\_ 5. If a 300-N action force is exerted to the right, the reaction force will be.

1. 300 N to the right c. 300 N to the left
2. 600 N to the right d. 600 N to the left

\_\_\_\_\_ 6. When a force is exerted on an object, an equal and opposite force is exerted by the object. These forces are referred to as.

a. centripetal forces c. gravitational forces

b. friction forces d. action-reaction forces

\_\_\_\_\_ 7. What will happen to an object when a net force acts on it?

1. Fall b. stop c. accelerate d. go in a circle

\_\_\_\_\_ 8. What is the force of gravity on an object known as?

1. centripetal force b. friction c. momentum d. weight

\_\_\_\_\_ 9. The upward force exerted on an object falling through air is \_\_\_\_\_\_\_\_\_\_\_\_.

 a. terminal velocity c. air resistance

 b. momentum d. weightlessness

\_\_\_\_\_ 10. “Every action has an equal and opposite reaction” is \_\_\_\_\_\_\_\_\_\_\_\_.

 a. the law of conservation of momentum c. Newton’s 2nd Law

 b. Newton’s 1st Law d. Newton’s 3rd Law

\_\_\_\_\_ 11. In the equation *p = m\*v*, *p* stands for \_\_\_\_\_\_\_\_\_.

 a. momentum b. friction c. inertia d. velocity

\_\_\_\_\_ 12. In the game of pool, when the cue ball (the white one) hits the other balls, what happens to the momentum?

a. it stays in the cue ball c. it disappears

b. it is transferred into the other balls d. the table absorbs all of the momentum

\_\_\_\_\_ 13. The amount of gravitational force between two objects depends on their \_\_\_\_\_\_\_\_\_\_\_\_\_.

 a. frictional forces c. inertia

 b. speed and direction d. masses and the distance between them

\_\_\_\_\_ 14. If you are standing on a scale in an elevator and it starts to go up to the next floor, what does the

scale show?

a. your actual weight c. less than your actual weight

b. more than your actual weight d. the scale shows zero

\_\_\_\_\_ 15. If you are pushing on an object and it is **NOT** moving, it is showing \_\_\_\_\_\_\_\_\_\_\_\_.

 a. static friction c. rolling friction

 b. sliding friction d. no friction

\_\_\_\_\_ 16. Earth exerts a stronger gravitational force than the moon because Earth has more \_\_\_\_\_\_\_.

 a. mass c. momentum

 b. density d. friction

\_\_\_\_\_ 17. The measure of the gravitational force exerted by Earth on an object is that object’s \_\_\_\_\_\_\_.

 a. mass c. weight

 b. momentum d. density

\_\_\_\_\_ 18. \_\_\_\_\_\_\_\_ forces cause motion, while \_\_\_\_\_\_\_\_\_\_ forces do not.

 a. balanced, unbalanced c. balanced, equal

 b. unbalanced, balanced d. equal, balanced

\_\_\_\_\_ 19. Which object would have the most inertia?

 a. baseball c. bowling ball

 b. basketball d. soccer ball

\_\_\_\_\_ 20. The weight of an object on the Earth will \_\_\_\_\_\_ when it gets to the moon, but the mass will \_\_\_\_\_\_\_\_.

 a. change, stay the same c. change, change

 b. stay the same, change d. stay the same, stay the same

21. Write each of Newton’s Laws and explain a real-world example of each.

    1st Law:

        EX:

    2nd Law:

        EX:

    3rd Law:

        EX: