PracTest PHY.02 - Newton's Laws

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. Galileo
   A. invented the telescope
   B. explained how the Earth could be moving
   C. was found innocent by the Catholic Church
   D. used the telescope to prove that the Earth was the center of all motion
   E. experimentally verified Aristotle's explanation of motion

2. The resistance an object has against acceleration is called
   A. inertia B. weight C. drag D. tension

3. Mass is
   I. a measure of the weight of an object
   II. the quantity of matter in an object
   III. the extent to which an object resists constant velocity
   A. I only C. III only E. I and III only G. I, II and III
   B. II only D. I and II only F. II and III only H. None of these

4. An object remains at rest. We can therefore conclude
   A. there are no forces acting on it C. there is a net force acting to the left
   B. there is a net force acting to the right D. the net force acting on it is zero

5. A heavy crate is pushed across a floor at a constant velocity. Friction is present between the crate and floor. During this motion, the force of friction is _?_ the force pushing the crate forward.
   A. greater than B. less than C. equal to

6. When the net force acting on an object doubles, the resulting acceleration
   A. quadruples C. remains the same E. none of these
   B. doubles D. halves

7. A marker pen with a certain mass is blown through a tube with a certain force and experiences a certain acceleration. Which of the following arrangements will result in marker pen experiencing an equal acceleration?
   A. A pen with half the mass acted on by twice the net force
   B. A pen with twice the mass acted on by half the net force
   C. Both of these
   D. None of these

15. One of the demonstrations performed in class involved a dumbbell and two strings. In this demonstration
I. the top string was broken when the bottom string was pulled slowly
II. the bottom string was broken when the bottom string was pulled quickly
III. the primary principle demonstrated was inertia

A. I only C. III only E. I and III only G. I, II and III
B. II only D. I and II only F. II and III only H. None of these

16. [On the Shores of the Cosmic Ocean] Mount Olympus (Olympus Mons) and Mariner Valley (Valles Marineris) can both be found on

A. Venus B. Earth C. Mars D. Jupiter

17. [Mechanical Universe-Inertia] A ball is dropped from the top of a mast on a moving ship. The ball will hit the deck

A. between the mast and the rear of the boat. B. at the base of the mast.

18. [Mechanical Universe-Newton's Laws] When launched as a projectile, a body's motion has two components

A. independent of each other. C. equal in magnitude and opposite in direction.
B. related to each other by velocity. D. related to each other by gravity.