

**T/F final exam APE 2018 fall**

*All of the following are True/False questions. Carefully read each of the following and record a T or an F for the answer next to the number. Example- F 13. .... **Also, if it is false, cross out what makes it false and write in what makes it true.***

\_\_\_1. Science exists to answer theoretical questions, technology solves practical problems, and engineering has no part of either.

\_\_\_2. It is not necessary for a scientific hypothesis to be testable.

\_\_\_3. Speed is rate of travel in a certain direction, and velocity just takes into account the distance per time.

\_\_\_4. A velocity per unit time is an acceleration, but it is not a rate.

\_\_\_5. A graph of constant acceleration is curved with a non-predictable slope.

\_\_\_6. A vector flies with a curved path.

\_\_\_7. Time, mass, and velocity are all examples of scalars.

\_\_\_8. Inertia applies to moving objects but not stationary ones.

\_\_\_9. An object with less mass has less inertia than an object with more mass.

\_\_\_10. Not all moving things have a net force acting on them.

\_\_\_11. Energy is the ability to do work, and has units of watts.

\_\_\_12. The rate that work is done is called power.

\_\_\_13. If you drop a rock off a cliff, just before it hits the ground only some of the potential energy is converted to kinetic energy.

\_\_\_14. Potential energy is the energy of movement and kinetic energy is stored in height or springs.

\_\_\_15. Air resistance and drag are the same thing and always act in the opposite direction of a falling object.

\_\_\_16. It can be useful to break vectors into components to solve for the total, or resultant, vector.

\_\_\_17. The SI unit for weight is pounds, but it is not a force.

\_\_\_18. Force causes acceleration and mass resists acceleration, always.

\_\_\_19. Friction is a force and acts opposite a moving object.

\_\_\_20. An object with a constant velocity has acceleration.

\_\_\_21. As a projectile flies it is accelerating in both the x and y directions.

\_\_\_22. We usually ignore air resistance when dealing with projectiles.

\_\_\_23. If you use m, s, and kg as units you can plug into any SI unit equation you want.