

Physics 11 Exam Overview Jan 2018

Our Exam will be Tuesday January 30th at 1:30 pm. If you have a conflict and can't write your exam at that time you must let me know ahead of time.

You may use your own formula sheet for the exam. It must be a single sheet of paper. You may not have any worked examples. You can have any formula you want.

Your exam will likely include questions on the following. This is not a definitive list.

Unit 1 Kinematics

- 1 problem using the four equations.
- Cliff problem, a car drives off a cliff.
- 1 projectile motion problem with the projectile shot at an angle.

Unit 2 Forces

- Calculate the acceleration of a block on a flat surface that is being pulled side ways by a rope, there will be friction on the block
- Calculate the required thrust on a rocket given the acceleration
- Calculate normal force

Unit 3 – Energy

- Calculate the height a car rolls up a hill using conservation of energy
- Calculate how high a motor can lift a mass given the efficiency of the motor.

Unit 4 Momentum

- Car crash problem
- Explain either the wooney dime collision or the carts smashing together and stopping
- Calculate the force during a collision

Electricity

- Be able to calculate the equivalent resistance of multiple resistors in series and parallel
- Be able to apply ohm's law in basic circuits
- Be able to identify series and parallel circuits
- Be able to describe the function of fuse and circuit breaker
- Be able to apply Kirchoff's laws in basic circuits

Waves

- Be able to use Snell's Law to calculate the angle of refraction
- Be able to describe what interference is and give examples