

Review for college Physics:

## **Unit One: Mechanical Systems**

**Chapter One:** pgs 62-64 chapters 1.1 , 1.3 , 1.4 , 1.5 , 1.7 , 1.8 , 1.9 :

Words – scalar , vector , position , displacement , speed , velocity , acceleration (instantaneous , average) , free fall , force , force of gravity , normal force , FBD , static and kinetic friction , tension , applied force , newton , inertia , net force , Newton's 3 Laws , weight , mass , coefficient of friction:

Key Equations: you put down:

**Chapter Two:** pgs 108 – 109 chapters 2.1 , 2.3 , 2.4

Words – machine , lever , fulcrum , effort and load (force,arm) , classes of levers , pulley , torque , law of levers , AMA , IMA , efficiency:

Key Equations: you put down:

## **Unit Two: Energy Transformations**

**Chapter Three:** pgs 166-167 chapters 3.1 , 3.2 , 3.4 , 3.6 , 3.7

Words – energy , energy transformation , work , joule , thermal energy , kinetic energy , gravitational potential energy , mechanical energy , heat , conduction , radiation , convection , energy resources(renewable and non-renewable) , different types of energy

Key Equations: you put down:

**Chapter Four:** pgs 200 – 201 chapters 4.1 , 4.2 , 4.4

Words – power , watt , efficiency , overall efficiency

Key Equations: you put down:

### **Unit Three: Hydraulic and Pneumatic Systems**

**Chapter Five:** pgs 269 -270 chapters 5.1 , 5.2 , 5.5

Words - fluids, hydraulics , pneumatics , density , compressibility , pressure , pascal , atmospheric pressure , pascal's principle , hydraulic press

Key Equations: you put down:

**Chapter Six:** pg 297 chapters 6.1 , 6.2 , 6.4

Words - fluid dynamics , viscosity , laminar and turbulent flow , drag , streamlining , bernoulli's principle

### **Unit Four: Electricity and Electronics**

**Chapter Seven:** pgs 360 -361 chapters 7.1 , 7.2 , 7.3 , 7.4 , 7.6 , 7.8 , 7.9

Words – current electricity , open/closed circuit , source and load , conductor , insulator , current , ampere , direct current , alternating current , conventional current , electric current , ammeter , voltmeter , electric potential rise and drop , volt , parallel and series connection , resistance , ohm , resistor , Ohm's law , equivalent resistance , kirchoff's current and voltage rules , fuse , overloaded circuit

Key Equations: you put down:

**Chapter Eight:** pgs 404 – 405 chapters 8.1 , 8.2

Words – semiconductor , acceptor and donor atoms , free electrons , LED