PHYSICS 1020 – Spring 1997

THINGS TO KNOW FOR 2nd EXAM

(3 March 1997)

- material covered in chapters 3, 4, 5 of the textbook
- material covered in lectures 4, 5, 6
- material covered in homework sets 3, 4, 5

Specific items to know:

- Aristotelian vs Newtonian physics
- law of inertia
- Galilei's law of falling
- position and coordinates
  — how to specify position
- vectors vs scalars, which physics quantities are vectors, which are scalars
- velocity, average vs instantaneous
- velocity vs speed
- acceleration
- uniform motion
- distance vs time for uniform motion
- motion with constant acceleration
- velocity vs time, distance vs time for motion with constant acceleration
- mass and weight
- units of basic quantities (length, velocity, acceleration, mass, force)
- force
- inertia, inertial mass
- Newton's laws of motion
- force vs mass, vs acceleration
- action/reaction force pairs

- gravitation
- gravitational force vs masses, vs distance
- acceleration due to gravity, free fall
- weight vs gravitational force
- inertial vs gravitational mass
- weight on surface of different planets
- momentum, angular momentum, their conservation