Review--Exam 3

Mechanism Design

Distinction between path and motion generation
Vector equations required for solution to left and right dyads
Knowing how to solve for unknowns
Knowing which parameters are given, which ones are to be solved for
How do you verify the motion of the device?
What are some quality measures of a designed 4-bar?

Kinematics

Being able to draw a skeleton
Using proper conventions on angles
Being able to determine what is known and what is to be solved for
Knowing how to solve for position, velocity and acceleration unknowns
Knowing how to compute the position, velocity and acceleration of any point on a device.

Cams

Understanding the advantages and disadvantages of constant acceleration, SHM, cycloidal cam profiles

Cam terminology

- pressure angle
- base circle
- prime circle
- pitch curve
- cam profile
- cam cooridinates
- radius of curvature
- undercutting

Being able to compute pressure angle, radius of curvature, s, s', s'', s'''
What is jerk? What is its significance?