

## Oral Exam Rubric

**Problem Solving:**

- Drew pictures first
- Made a plan
- Checked in with: “What am I doing?”, “Why am I doing it?”, and “How does it fit in with my plan?”
- Checked answer. “Is it reasonable?” (e.g. units or order of magnitude)
- Checked limiting values of answer.

**Forces**

- Drew a free body diagram and checked it for completeness
- Setup coordinates
- Decomposed vector forces into components
- Used Newton’s second law
- Reasoned clearly about accelerations and velocities

**Energy**

- When does conservation of energy apply?
- When does conservation of mechanical energy apply?
- What are kinetic and potential energy?
- What is work and how does it relate to energy?
- Demonstrated energy conservation in a problem

**Momentum**

- When is momentum conserved?
- What is momentum?
- What are elastic and inelastic collisions?
- Demonstrated conservation of momentum in a problem
- Knew the relationship between momentum and force

**Clarity and reasoning:**  Demonstrated the ability to argue why the claims made were true

**Further comments (may be continued on back):**