PEER ASSISTED STUDY SESSIONS – Workshop 3(Mock Midterm)

Facil: Ross Cruikshank Course: ECOR 1101 Date: Jan. 28-Feb.1, 2013

Office Hour: Wednesday 9:00 – 10:00, TB 302(SASC)

PASS MOCK EXAM – FOR PRACTICE ONLY

Dates and locations of mock exam take-up:
1. Monday January 28, 2013, 6:00-7:30 in ML 402
2. Thursday January 31, 2013, 6:00-7:30 location TBA

IMPORTANT:

It is most beneficial to you to write this mock midterm UNDER EXAM CONDITIONS. This means:

- Complete the midterm in 2.5 hour(s).
- Work on your own.
- Keep your notes and textbook closed.
- Attempt every question.

The purpose of this mock exam is to give you practice answering questions in a timed setting and to help you to gauge which aspects of the course content you know well and which are in need of further development and review. Use this mock exam as a learning tool in preparing for the actual exam.

Please note:

- Come to the PASS session with your mock exam complete. There, you can work with other students to review your work.

- Often, there is not enough time to review the entire exam in the PASS session. Decide which questions you most want to review – the facilitator may ask students to vote on which questions they want to discuss.

- Facilitators do not bring copies of the mock exam to the session. Please print out and complete the exam before you attend.

- Facilitators do not produce or distribute an answer key for mock exams. Facilitators help students to work together to compare and assess the answers they have. If you are not able to attend the PASS session, you can work alone or with others in the class.

2.5 hour exam. Closed book.

Problem 1

For $\mathbf{A} = 3\mathbf{i} + 2\mathbf{j} - 5\mathbf{k}$; $\mathbf{B} = -7\mathbf{i} + 11\mathbf{j} + 3\mathbf{k}$; $\mathbf{C} = 2\mathbf{i} - 4\mathbf{j} + 5\mathbf{k}$.

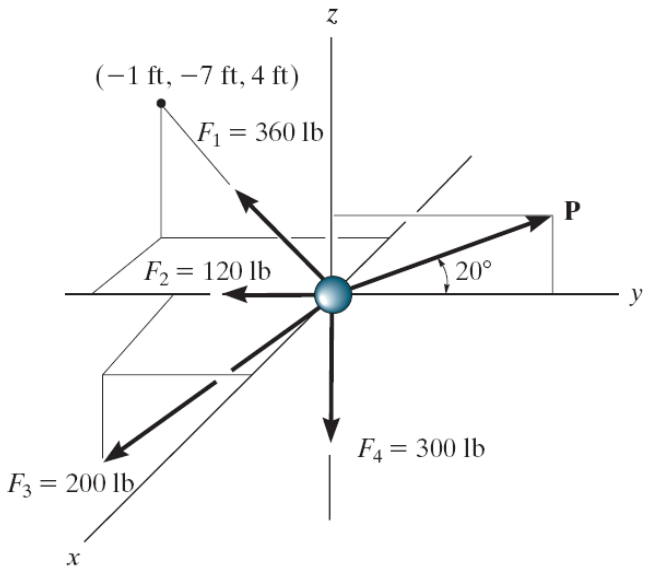
a) Calculate $\mathbf{A} \times \mathbf{B}$

b) Calculate $\mathbf{B} \bullet \mathbf{C}$

c) Calculate $\mathbf{A} \times \mathbf{B} \bullet \mathbf{C}$.

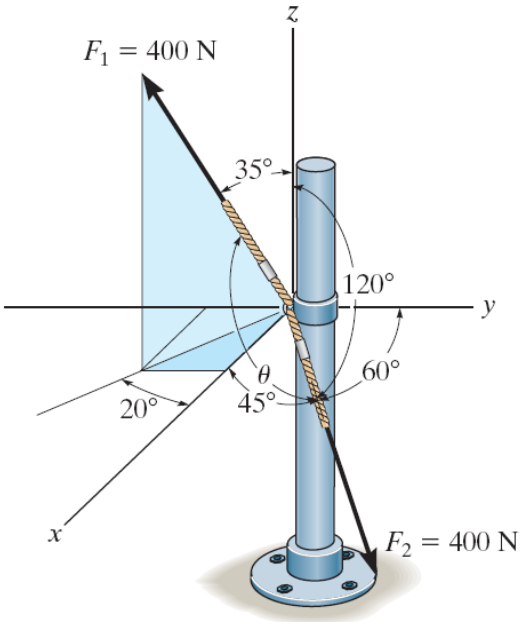
Problem 2

Determine the magnitude of **P** and coordinate direction angles of $\mathbf{F_3}$ required for equilibrium of the particle. Note that $\mathbf{F_3}$ acts in the octant shown.



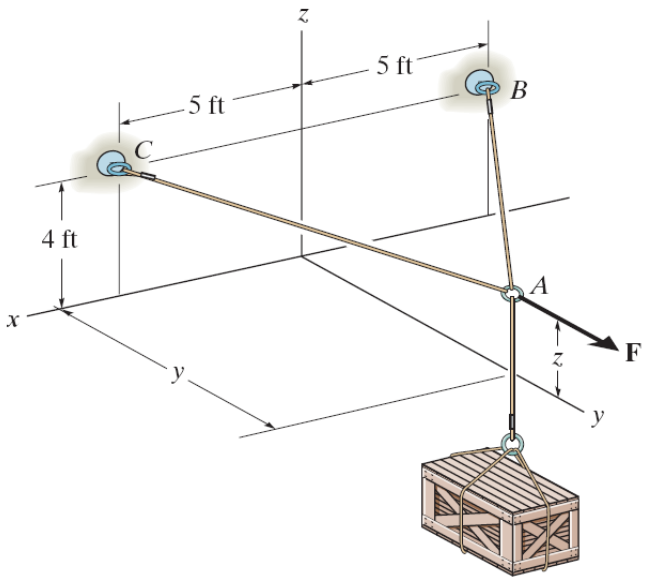
Problem 3

Determine the magnitude of the components of $\mathbf{F_1}$ along and perpendicular to the line of action of $\mathbf{F_2}$.



Problem 4

A force of **F** = 100 lb holds the 400-lb crate in equilibrium. Determine the coordinates (0,y,z) of point A if the tension in cords AC and AB is 700 lb each.



Problem 5

If the tension in the cable is F = 140 lb, determine the magnitude of the moment produced by this force about the hinged axis, CD, of the panel.