Examination Feedback for EEE6203/EEE6210
Spring Semester 2014-15

Feedback for EEE6203/EEE6210 Session: 2014-2015

Feedback: Please write simple statements about how well students addressed the exam paper in general and each individual question in particular including common problems/mistakes and areas of concern in the boxes provided below. Increase row height if necessary.

General Comments:

The assessment includes coursework which contributes to 25% of the total.
The final results by this cohort of students which consist of MEng and MSc students in Electronic and Electrical Engineering, and MEng students in Aerospace Engineering are as expected.

Question 1:

Some students have difficulties to relate linear motion to the rotary motion, and hence were not able to answer Q1 (a). It should be noted that given the expression for the lead screw pitch s, the remaining parts of the question should be relatively easy to answer with appropriate consideration of the gear ratio.

Question 2:

Derivation of the H-bridge converter gain appears to be a problem. Please remember to use triangle relationship formed by the control signal and triangle carrier. In addition, many students find it difficult to estimate the maximum current ripple of the unipolar operation.

Question 3:

The operating condition in Q3 (b) should be applied when determining the time durations of the space vector PWM. Many students were not able to calculate the phase angle of the voltage vector for the condition specified in Q3 (b).

Question 4:

Good understand of the torque production mechanism in induction machine will be necessary to answer Q4 (b). Some students need to pay attention to numerical calculations with complex number in Q4 (c)

Question 5:

Coursework

Most students did well with their coursework, and many were able to perform the extra task which requires simulation of inverter with SVPWM. However, a small number of students showed poor knowledge on basic simulation skills and was not able to perform the case studies. Students should also pay attention to quality of observations and discussions of the results obtained from simulation studies.