

## Electric Machines & Drives

**Homework #3 Answers:** Chapter 7, Chapter 8, Chapter 13

**Due:** 09/19/11

### Chapter 13 of text book – Answers.

13-10: a. 360 RPM b. no c. 20

13-15: a. 600 RPM b. 564 RPM

13-16: 3V, 45Hz b. 0.67 V, 10Hz c. 1V, 15Hz (-15Hz OK also)

13-18: 97.2A

13-30 (a only) : 18.6 MVAR

13-32: 264.5 mm

13-36: a. 90 coils b. 30 coils per phase c. 5 coils per group d. 266 mm coil pitch  
e.  $0.1081 \text{ m}^2$  f. 58.4 mWb

### **Note:**

**For Problem 13-36, assume coil pitch = pole pitch**

The homework is our practical application learning tool and peer review and feedback is strongly encouraged. I strongly encourage students to review their homework with other students and to provide me with early copy so I can review and provide feedback well before due date. Homework submitted before due date can be re-submitted for better grade as long as re-submit is by due date. Once due date passes, no homework submittals or re-submittals will be accepted. **Homework must be submitted by midnight of the due date to received credit.**

Late homework submittals will receive no credit. Worked solutions will be posted on course website the day after the homework due date.