

Menoufiya University
Faculty of Engineering Shebin El-kom
Course: Analysis of Harmonics in Electrical Machines
Date : 12/1/2015
Mark :100

Time: 3- Hour

Ph.D-Final-term Exam.

Answer the following:

Write a brief summary about the following:

1-Harmonic generation within electric machines and variable speed drives (Dc and AD drives).

2-The effect of harmonics on the performance of electrical machines.

3-Calculation of harmonics in DC and AC drives.

4-Remidial techniques using; additional inductance, a higher pulse number (12-pulse or higher), and active harmonic filter.

5-Modling and control of Permanent Magnet Synchronous Generator (PMSG) driven by wind turbine.

Good luck

Prof.Dr. Sabry Abdellatif Mahmoud