

The questions:

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| Question 1 2 points | Draw a 'converter pole' with transistors and diodes. In how many quadrants and with one does it work. |
| Question 2 3 points | For a single phase full bridge rectifier: Describe the process of commutation for the current between the thyristors. How effect the inductor L_S value and the current value the commutation process? |
| Question 3 2 points | Describe the operation of a single-phase-power-factor corrected circuit. What is the relation between the supply voltage and dc-bus voltage? Plot the current in the inductor (i_L) during the switching. |
| Question 4 1 points | How to avoid inrush current of a rectifier? |
| Question 5 2 points | How can you change the direction of the rotation for an AC machine? How can you calculate the speed of the rotor of an AC asynchronous machine? (as function of the slip) |