**Oral Exam Subjects Electrical Circuits Theory**

Ideal voltage source, real voltage source, ideal current source, real current source

Sinusoidal quantities. Applications

Impedance, resistance and reactance, impedances triangle. Apllications

Ideal resistor supplied by an AC voltage. Applications

Ideal coil supplied by an AC voltage. Applications

Ideal capacitor supplied by an AC voltage. Applications

Powers in AC cicuits. Powers triangle. Applications

Power factor. Improvement of the power factor. Applications

RLC circuit. Resonance in RLC circuit. Applications

Connections of the three phase supply. Applications

Symmetrical Components. Applications for the decomposing of non-symmetrical measures

Parameters and equations of the Two port networks

Connections of two port networks

Non-sinusoidal waveforms . Applications