EERI418 Pracitcal experiment design

MJ Bezduienout 24162299

G.A. de Klerk 23425733

March 8, 2017

Table 1: Values to be measured/calculated

Variables and parameters	Symbol and unit
Armature Volatage	$v_a(t)$[V]
Armature Current	$i_a(t)$[A]
Motor Speed	$\omega(t) = \dot{\theta}(t)$[rad/s]
Armature Resistance	R_a [Ω]

The purpose of this lab session is to design experiments to determine the time constants $\tau_a$and τ_l, where:

$$\tau_a = \frac{L_a}{R_a}$$
$$\tau_l = \frac{R_a J}{R_a b + K_b K_m}$$