

EE4BD4 Lab 5 Marking Scheme (10 Marks)

1. Show raw AND filtered data for looking right, left and straight ahead in time AND frequency domain **(2 Marks)**
 - Just show the extremes (looking left 30° , looking right 30° , looking straight ahead 0°) for time and frequency domain signals
2. Plot of Gain vs. Frequency from 0 – 100 Hz with input being 20 mV from the function generator **(2 Marks)**
3. Plot of Amplitude vs. Theta **(4 Marks)**
 - X-axis is theta defined as the angle between the normal (looking straight ahead) and between the direction of gaze
 - $-30^\circ \leq \theta \leq +30^\circ$ (increments of 5°)
 - Y-axis is the average of 3 seconds of data (voltage) collected at the corresponding theta.
 - Perform linear regression on the plot (give the $y = mx + b$ equation) and provide the coefficient of determination (R^2) of the linear regression. INTERPRET the results and explain what they mean.
4. Discuss differences between the theoretical and actual EOG signal/data **(2 Marks)**

