**Tutorial 4: ADC Metrics**

**Bhekanani Cele, CLXBHE005**

**Kwena, Komape, KMPKWE002**

* 1. ADC Metrics

Question 1

1) N=2𝑀 => 10\*1024 = 2𝑀 => M = log2((10∗1024)/10) = 10 bits.

2) 𝑄 = = = 9.96mV/step

Question 2

1) V(FSR) = 25-5=20

LSB = = = 0.31875V

Error = (LSB \*Vref)/2^n=0.31875\*2.55/2^3=0.1016

2) SFDR = 10log10(PS /PREF) = 10log10(25/5) = -6.9897