# UNIVERSITY OF CAPE TOWN

IYUNIVESITHI YASEKAPA · UNIVERSITEIT VAN KAAPSTAD

DEPARTMENT OF ELECTRICAL ENGINEERING

## EEE3095S/EEE3096S Practical 4 Demonstrations
## 2022

Total Marks Available: 30

|  | STUDENT 1 | STUDENT 2 |
|---|---|---|
| STUDENT SURNAME | ABRAHAM | KEGAKILWE |
| STUDENT FIRST NAME | KARAN | OMOLEMO |
| STUDENT NUMBER | ABR KAR009 | KGK OMO001 |
| STUDENT SIGNATURE |  |  |

Std 3
NJAMELA
BONGA
NJMLUN002
*(signature)*

| TUTOR NAME + SIGNATURE | Daniel, Coert *(signature)* |
|---|---|
| DATE [YYYY-MM-DD] | 18/10/2022 |

| Section | Action + Mark Allocation | Mark |
|---|---|---|
| Intro | Introduce yourselves and briefly describe the purpose of the practical/demonstration. [3 marks] | 3 |
| LUTs | Verify that the LUTs correspond to the correct wave shapes. Wave should have a frequency of 1Hz and range from 0-1023. [3 Marks] | 3 |
| TIM2CLK | Ensure that the correct value for TIM2CLK has been used. [1 Mark] | 1 |
| TIM2_Ticks | Verify that TIM2_Ticks has been calculated correctly. [3 Marks] | 3 |
| Filter | Test low pass filter using Oscilloscope and function generator. Ensure that filter attenuated signals above the cutoff frequency. Signals below 5kHz should not be attenuated. [5 Marks] | 4 |
| DAC | The 3 waveforms (sine, triangle, sawtooth) can be generated with frequencies up to 5kHz. [9 Marks] | 8 |
| PB | The pushbutton can be used to cycle through the waveforms. [3 Marks] | 1 R2 |
| General | Well-written, well commented code. Code uploaded to Git. Sensible variable names, functions in correct places etc. Overall preparedness for demo. [3 Marks] | 3 |
|  | TOTAL | 26 |