# METCERT TIME & FREQUENCY METROLOGY APPLICATION FORM NLA-MC-F-G10-01

## G10-M REGISTRATION as a *METROLOGIST* (Time & Frequency – T&F)

### Practical Calibration Tasks & Requirements.

| | | | | |
|---|---|---|---|---|
| Number of Years of Experience in **Time & Frequency** Metrology | | Please Submit Evidence | | |
| Registered as a "Trainee Metrologist" *(If yes state registration number)* | | | | |
| Holder of a SANAS Time & Frequency Certificate of Competence | | Y | N | |
| Successful completion of NLA Time & Frequency Exam | | Y | N | |

**Evidence of successfully completed tasks in a laboratory:**
Reference to ONE (1) Calibration per task to be entered.
Reference to participation in ONE (1) ILC is mandatory.
Data entered shall preferably not be older than 5 years.
(When supplying evidence of tasks/certificates, please use number on left below to identify the task/certificate).

| No | Calibration Tasks (Add additional supporting tasks if desired) | Equipment Model | Cert No | *(for Office use only)* | Participated ILC *(Details or Report No.)* | *(for Office use only)* |
|---|---|---|---|---|---|---|
| | **At least five items are required, with at least one item per block (A, B & C)** | | | | | |
| **A1** | Calibration of the Frequency Generator or Source | | | | | |
| **A2** | Generation of a Frequency with known Accuracy | | | | | |
| **A3** | Calibration of Tachometers | | | | | |
| **B1** | Calibrate a Time Interval Source | | | | | |
| **B2** | Generate a Time Interval with known Accuracy | | | | | |
| **B3** | Calibration of Stopwatches | | | | | |
| **C1** | Calibration of Frequency Counter | | | | | |
| **C2** | Calibration of a Function Generator | | | | | |
| **C3** | Calibrate the Phase Angle between two Periodic Waves | | | | | |
| **C4** | Measure the rise- or fall-time of a pulse | | | | | |
| **C5** | Calibrate an Oscilloscope | | | | | |
| | | | | | | |

**► Data including a detailed calculation of the Uncertainty of Measurements must be submitted for at least one of the certificates submitted for evaluation ◄**

I hereby declare that the above information is a true reflection of my experience.

Name: Signature:

Date:

Application is supported by Head of Lab or Registered Metrologist

Name: Signature:

Position:

## G10-E REGISTRATION as an *EXPERT METROLOGIST* (Time & Frequency – T&F)

### Practical Calibration Tasks & Requirements.

| | | | |
|---|---|---|---|
| Number of Years of Experience in **Time & Frequency** Metrology | | Please Submit Evidence | |
| Registered as a "Time & Frequency Metrologist" *(If yes state registration number)* | | | |
| Successful completion of NLA Time & Frequency Course Exam | Y | N | |
| **All tasks** for T&F Metrologist Level (See Form G10-M) completed | Y | N | |

**Evidence of successfully completed tasks in a laboratory:**
Reference to ONE (1) Calibration per task to be entered.
Reference to participation in ONE (1) ILC is mandatory.
Data entered shall preferably not be older than 5 years.
(When supplying evidence of tasks/certificates, please use number on left below to identify the task/certificate).

| No | Calibration Tasks. (Add additional supporting tasks if desired) | Equipment Model | Cert No | *(for Office use only)* | *Participated ILC *(Details or Report No.)* | *(for Office use only)* |
|---|---|---|---|---|---|---|
| | **The following 4 tasks are required:** | | | | | |
| **1** | Demonstrate the maintenance (monitoring) of a Frequency Standard using GPS, determine and apply corrections to provide Frequency Traceability in a laboratory | | | | | |
| **2** | Calibration and characterisation of a Local, Fixed Frequency, Standard - (Oscillator) | | | | | |
| **3** | Calibration of a High accuracy Frequency Counter | | | | | |
| **4** | Calibrate a High Accuracy Time Interval Source - (Uncertainty ≤ 1 µs) | | | | | |
| | **At least 2 of the following 3 tasks are required:** | | | | | |
| **5** | Oscillator phase calibration | | | | | |
| **6** | Calibrate an Oscilloscope with a Bandwidth >250 MHz | | | | | |
| **7** | Calibrate a Pulse for Rise and Fall Time - (Characterization) | | | | | |
| **8** | | | | | | |
| **9** | | | | | | |
| **10** | | | | | | |
| | | | | | | |

**► Data including a detailed calculation of the Uncertainty of Measurements must be submitted for at least one of the certificates submitted for evaluation ◄**

I hereby declare that the above information is a true reflection of my experience.

Name: Signature:

Date:

Application is supported by Head of Lab or Registered Expert Metrologist

Name: Signature:

Position: