# Knowledge Assignment

**Assessment event 1 of 3**

## Criteria

### Unit code, name and release number

MSL972001 - Conduct routine site measurements (1)

### Qualification/Course code, name and release number

MSL30118 - Certificate III in Laboratory Skills (1)

## Student details

### Student number

### Student name

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is my own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Version: 1.0

Date created: 15/06/2019

Date modified: 29/01/2020

For queries, please contact:

Innovative Manufacturing, Robotics and Science SkillsPoint

Hamilton Campus

© 2020 TAFE NSW, Sydney  
RTO Provider Number 90003 | CRICOS Provider Code: 00591E

This assessment can be found in the: [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

The contents of this document are copyright © TAFE NSW 2020, and should not be reproduced without the permission of the TAFE NSW. Information contained in this document is correct at time of printing: 29 January 2020. For current information please refer to our website or your teacher as appropriate.

## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your knowledge as would be required to:   * Prepare for measurements * Perform measurements * Finalise measurements * Maintain a safe work environment |
| **Assessment Event number** | 1 of 3 |
| **Instructions for this assessment** | This is a written assessment and it will be assessing you on your knowledge of the unit.  This assessment is in 3 parts:   1. Multiple choice questions (Questions 1 – 15) 2. True or False questions (Questions 16 – 30) 3. Assessment feedback   This assessment will be supervised in a classroom |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your trainer for marking.  It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To achieve a satisfactory result for this assessment all questions must be answered correctly and submitted by the due date |
| **What do I need to provide?** | Pens and pencils |
| **Due date/time allowed** | TBA / 45 minutes |
| **Assessment feedback, review or appeals** | In accordance with the TAFE NSW policy *Manage Assessment Appeals,* all students have the right to appeal an assessment decision in relation to how the assessment was conducted and the outcome of the assessment. Appeals must be lodged within **14 working days** of the formal notification of the result of the assessment.  If you would like to request a review of your results or if you have any concerns about your results, contact your Teacher or Head Teacher. If they are unavailable, contact the Student Administration Officer.  Contact your Head Teacher for the assessment appeals procedures at your college/campus. |

## Part 1: Multiple choice (Questions 1 – 15)

Read the question and each answer carefully. Put an X in the table next to your chosen answer.

1. Before taking an onsite measurement, it is important to consider:

Table 2 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. that the correct point has been located |  |
| 1. that the correct sampling points have been located |  |
| 1. any specific hazardous conditions that must be considered such as steam, pressure, snakes etc. |  |
| 1. all of the above |  |

1. When completing an onsite result sheet, it is important to:

Table 3 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. use legible handwriting |  |
| 1. record data using appropriate accuracy, precisions and units |  |
| 1. ensure the information is correct, noting also environmental/site conditions that may affect the data quality |  |
| 1. all of the above |  |

1. Which of the following could be used to ensure the accuracy and precision of onsite measurements?

Table 4 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Re-reading the sample to obtain a consistent value |  |
| 1. Using only calibrated equipment and correcting for any bias |  |
| 1. Running a reference (quality control) sample under the same experimental conditions |  |
| 1. All of the above |  |

1. What information about an onsite test should be recorded in the laboratory data system?

Table 5 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Comments related to any irregularities observed in the testing, results, quality control data and equipment |  |
| 1. Date, time and location of sampling |  |
| 1. Testing required and test results |  |
| 1. All the above |  |

1. Which of the following could be used to maintain confidentiality of onsite testing data?

Table 6 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Database (for receipt, results and reports) is password protected |  |
| 1. Only authorised personnel are permitted to access data |  |
| 1. Release of data is only by authorisation of approved delegate |  |
| 1. All the above |  |

1. Ethical behaviour involving onsite measurements would **not** include:

Table 7 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. working diligently and responsibly in accordance with workplace policy and procedures |  |
| 1. ensuring confidentiality of information, including client identification and test results |  |
| 1. altering the results of an analysis to ensure the test result was compliant |  |
| 1. behaving honestly, respecting others and treating them with courtesy and impartiality |  |

1. Legislative requirements that apply to making onsite measurements includes:

Table 8 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. WHS and workers compensation |  |
| 1. equal employment, anti-discrimination and anti-harassment |  |
| 1. environmental protection |  |
| 1. all the above |  |

1. Hazards and WHS issues related to onsite measurements could include:

Table 9 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. workplace accidents or near-misses |  |
| 1. emergency situations such as fire, bomb threat, security threat and explosion |  |
| 1. handling of dangerous goods including biological, chemical or radioactive spills |  |
| 1. workplace injuries such as cutting, stabbing, puncturing, crushing, immersion in water, suffocation, snake bite, hypothermia, burns, allergic reactions and assaults |  |
| 1. all of the above |  |

1. Discharges to the environment when completing an onsite measurement could include:

Table 10 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. liquid wastes such as raw sewage |  |
| 1. heat such as steam or hot water discharges |  |
| 1. escape of fugitive gases from a production process |  |
| 1. all the above |  |

1. Which of the following actions would be useful in checking obvious errors or atypical data?

Table 11 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Careful re-reading of the procedure |  |
| 1. Check of the calibration, zero error and drift for basic instruments |  |
| 1. Repeating the measurements |  |
| 1. Seeking advice from your trainer |  |
| 1. All the above |  |

1. Which of the following terms is a measure of how accurate test results are?

Table 12 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Error |  |
| 1. Uncertainty |  |
| 1. Repeatability |  |
| 1. Traceability |  |

1. Which of the following terms is a measure of the precision of test results?

Table 13 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Error |  |
| 1. Uncertainty |  |
| 1. Repeatability |  |
| 1. Traceability |  |

1. Measurements taken onsite are a snapshot of what is occurring in a system at a point in time. The measurement:

Table 14 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. should represent the entire population for this parameter |  |
| 1. should be reported with the correct units and significant figures |  |
| 1. should have had atypical data/errors investigated prior to reporting |  |
| 1. all of the above |  |

1. Which of the following would not be appropriate behaviour when making an onsite measurement?

Table 15 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Completing all onsite inductions required for access to the area |  |
| 1. Leaving wastes materials in the area |  |
| 1. Removing any hazardous materials according to standard operating procedures |  |
| 1. Minimising any environmental impact of taking the measurement |  |

1. It is important for all laboratory personnel to consider their limitations when making measurements onsite and seek advice to:

Table 16 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. ensure their personal safety and the safety of others in the area |  |
| 1. ensure adequate training can be provided in a particular task |  |
| 1. contribute to professional development |  |
| 1. all the above |  |

## Part 2: True or false (Questions 16 – 30)

Read the question and then write **True** or **False** in the space provided.

Table 17 True or false

| Question | Write *True* or *False* |
| --- | --- |
| 1. All measurements are estimates of the real value. |  |
| 1. Traceability of samples, from taking of sample all the way to final reporting, is a legal requirement. |  |
| 1. The SI system of units consists of 7 base units, from which 22 derived units can be determined. The kilogram is the SI unit for mass. |  |
| 1. It is irrelevant where the measurement is made, just as long as it is made at the correct time. |  |
| 1. Equipment manuals and service logs are important parts of the quality system that relate to maintenance of equipment for use onsite. |  |
| 1. Clarification of the measurements to be taken is not important to ensure you fully understand the request. |  |
| 1. This action would be appropriate:   You complete the scheduled field survey identifying a plant species that is considered endangered. The species is only found on one site. You report this to an activist group as well as to your supervisor. |  |
| 1. A technician should routinely check the area for hazards immediately before, commencing and during a task. |  |
| 1. For field measurements it is important to minimise the environmental impact of the task. This could include the generation of wastes in the field and also the impact of movement of vehicles in the field. |  |
| 1. When completing onsite measurements, reporting abnormal emissions or discharges would be considered as part of the legal and ethical requirements of the work. |  |
| 1. The purpose of paperwork for WHS and environmental incidents is not to blame, but to determine how to avoid the situation occurring again in the future. |  |
| 1. Analysis results for onsite measurements should all be averaged to give the final result, even if there is an obvious outlier result. |  |
| 1. Pre-use checks of equipment are important as they indicate if the equipment is calibrated, safe to use, and fit for purpose. |  |
| 1. To prevent introducing an error, it is important that all test equipment is thoroughly cleaned/decontaminated, according to manufacturer instructions before and after use. |  |
| 1. Environmental observations made during an onsite measurement are irrelevant and should be ignored. |  |

## Part 3: Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome

Satisfactory

Unsatisfactory

### Assessor Feedback

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date:

### Student acknowledgement of assessment outcome

Would you like to make any comments about this assessment?

### Student name, signature and date

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***