# Knowledge assessment 4

**Assessment event 4 of 6**

# Trainer & Assessor Marking Guide

## Criteria

### Unit code, name and release number

MSL954003 - Relate anatomical and physiological features to laboratory samples (1)

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

MSL50118 - Diploma of Laboratory Technology (1)

MSL40118 - Certificate IV in Laboratory Techniques (1)

\*\*Amend the qualification box before distributing to the student. The information here should only contain the qualification the student is enrolled in\*\*

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For queries, please contact:

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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)

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Instructions for the trainer and assessor** | This is a written assessment and will be assessing the student on their knowledge of the unit.  This assessment is in 4 parts:   1. Multiple choice questions 2. True or False questions 3. Short answer questions 4. Assessment feedback   This is an open book assessment.  Model answers, sample responses or a criteria for each question are provided below.  Use these to support your judgement when determining a satisfactory result.  The student’s response to each question must contain the information indicated in this marking guide in order for their response to be correct. However, if a student provides information other than indicated below, and in the professional opinion of the assessor it is appropriate and meets the intent of the question, it may be considered correct.  The assessment feedback page must be signed by both the student and the assessor so the student displays that they have received, understood and accepted the feedback.  Complete the assessment feedback to the student and ensure you have taken a copy of the assessment prior to it being returned to the student.  Ensure the students name appears on the bottom of each page of the submitted assessment. |
| **About this marking guide** | The student’s response to each question must contain the information indicated in this marking guide in order for their response to be correct.  All questions must be answered correctly in order to satisfactorily complete this assessment event.  Assessors will need to make a judgement call as to whether each answer/response meets the criteria based upon the:   * Rules of Evidence:   + Validity – does the answer address the assessment question and does the evidence reflect the four dimensions of competency?   + Sufficiency – is the answer sufficient in terms of length and depth?   + Currency – has the work been done so recently as to be current?   + Authenticity – is this work the student’s own authentic work? * Principles of Assessment:   + Fairness – individual student’s needs are considered in the assessment process   + Flexibility – assessment is flexible to the individual student   + Validity – any assessment decision is justified, based on the evidence of performance of the student   + Reliability – evidence presented for assessment is consistently interpreted and assessment results are comparable irrespective of the assessor conducting the assessment * Dimensions of competency   + Task skills   + Task Management Skills   + Contingency Planning Skills   + Job Role Environment Skills |
| **Student must provide** | Pens, student workbook for this unit |
| **Assessor must provide** | This assessment task, suitable classroom for an exam |
| **Time allowed** | 1 hour |

## Part 1: Multiple choice

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

1. Blood groups are determined by testing for A and B antigens on the:

Table 2 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. white blood cell |  |
| 1. platelet |  |
| 1. red blood cell | X |
| 1. leucocyte |  |

1. The haematological system:

Table 3 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. consists of the blood and bone marrow |  |
| 1. delivers oxygen and nutrients to all tissues |  |
| 1. transports gases, immune cells and hormones throughout the body, and removes waste |  |
| 1. all of the above | X |

1. An example of a precious specimen is:

Table 4 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. wound swab |  |
| 1. mid-stream urine |  |
| 1. cerebrospinal fluid | X |
| 1. EDTA treated blood sample |  |

1. Sodium Citrate (Light Blue) vacutainer blood collection tubes:

Table 5 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. are used for coagulation and platelet function tests |  |
| 1. should not to be the first tube filled after venepuncture |  |
| 1. need to be completely filled to ensure accurate dilution of the blood with the additive |  |
| 1. all of the above | X |

1. Common tests related to the gastrointestinal system are:

Table 6 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. fine needle biopsy, ultrasound, urine sample, endoscopy |  |
| 1. ultrasound, faecal specimen, barium meal, endoscopy | X |
| 1. blood test, ultrasound, core biopsy, faecal specimen |  |
| 1. endoscopy, ultrasound, vaginal swab, blood test |  |

1. Common tests related to the respiratory system are:

Table 7 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. chest X-ray, blood test, skin smear, CT scan |  |
| 1. chest X-ray, lung function tests, RBC count, sputum specimen |  |
| 1. sputum specimen, ECG, biopsy, CT scan |  |
| 1. chest X-ray, CT scan, lung function tests, sputum specimen | X |

1. Swab specimens are taken to:

Table 8 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. test for microbes | X |
| 1. examine ear wax in detail |  |
| 1. determine the Rh factor |  |
| 1. observe body fluids under a microscope |  |

## Part 2: True or false

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

Table 9 True or false

| Question | Write *True* or *False* |
| --- | --- |
| 1. Blood is a temperature sensitive specimen | T |
| 1. The common tests performed on CSF are: microscopic analysis, culture and sensitivity ,and biochemical tests including nitrites, protein and glucose levels | T |
| 1. Haematology tests are not sensitive to errors in specimen collection | F |
| 1. Faecal samples should be frozen to preserve parasitology and microbiology | F |
| 1. Urine should be refrigerated if not tested within 30 minutes | T |
| 1. Precious specimens must be tested as soon as possible following sampling | T |
| 1. An autopsy should be carried out as soon as possible after death | T |
| 1. Fresh tissue specimens can be used to study the microbes present | T |
| 1. A skin biopsy could be used to determine the nature of cancerous lesions | T |
| 1. It is rare to receive a whole organ for analysis | T |

## Part 3: Short answer

Read the question carefully. The recommended word count is listed at the end of each question.

1. Specimens received for histological examination are what types of samples (1 to 5 words):

Tissues or organs

1. List three reasons why you would reject a specimen (3 to 15 words):

Any three of the following:

Collected in the wrong tube or media

Leaking

Contaminated

Unlabelled

Discrepancies between the labelling on the request for and the sample

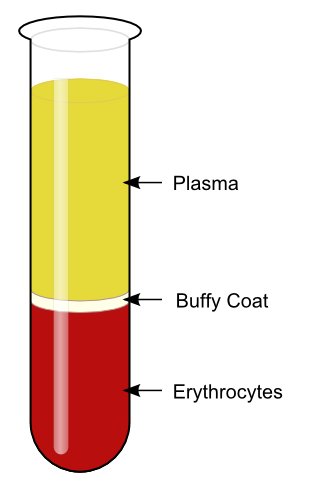
Too old for test requested

1. Different samples require different pre-treatment processes:
   1. In column A, list the type of pre-treatment (1 word per cell)
   2. In column B, list an example specimen that would undergo the pre-treatment listed in column A (2 to 5 words per cell)

Table 10 Complete the table

| Pre-treatment | Example specimen |
| --- | --- |
| Incubation | Microbiological samples |
| Fixation | Tissue samples |
| EDTA | Blood |
| Staining | Tissue, cell and blood samples |

1. When you centrifuge a blood sample, you end up with (5 to 25 words):



[Blood centrifugation scheme](https://de.m.wikipedia.org/wiki/Datei:Blood-centrifugation-scheme.png), by [Knute Knudsen](https://en.wikipedia.org/wiki/User:KnuteKnudsenhttps:/en.wikipedia.org/wiki/User:KnuteKnudsenhttps:/en.wikipedia.org/wiki/User:KnuteKnudsenhttps:/en.wikipedia.org/wiki/User:KnuteKnudsenhttps:/en.wikipedia.org/wiki/User:KnuteKnudsen), under [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/), modified for use in assessment

1. If you receive a request for the following - FBC, HbA1c and group and hold for Xmatch what **department(s)** within the laboratory would they need to be directed to (10 to 15 words)?

FBC - Haematology

HbA1c – Haematology

Group and hold for Xmatch – Immunohaematology

1. Why do you need to use an anticoagulant (3 to 5 words)?

To keep a sample clot free / keep blood liquid

1. The time between collection and testing for most blood tests is important. What impact will delays have on coagulation time, electrolytes and blood glucose in an unspun serum tube (5 to 20 words)?

Either or both would be correct:

Affect results

Coagulation effects

1. Why is urine collected at midstream (3 to 10 words)?

To prevent contamination

1. Give two two examples of where a fresh tissue specimen is preferred to a preserved specimen (3 to 10 words):

Answer can include any of the following but is not limited to:

CFS, fungal swab, Blood

1. Complete the following table by:
   1. Describing the specimen taken in column B (3 to 10 words per cell)
   2. Providing an example of the organ or body location that a specimen might be taken from in column C (1 to 3 words per cell)

Table 11 Complete the table

|  |  |  |
| --- | --- | --- |
| Sampling procedure | Description | Body location / organ |
| Biopsy – wedge | Whole area taken | External epithelial |
| Biopsy – core | Wide needle, whole core taken | Organs, internal |
| Biopsy – punch | Small ‘core’ | Either / or:  External epithelial  Deeper epithelial tissue |