# Knowledge assessment 2

**Assessment event 2 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\*\*

Version: 1.0

Date created: 13/05/2019

Date modified: 06/12/2019

For queries, please contact:

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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)

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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 3 parts:   1. Multiple choice questions 2. Short answer questions 3. 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** | 1.5 hours |

## Part 1: Multiple choice

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

1. The cardiovascular system is responsible for:

Table 2 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. pumping blood around the body | X |
| 1. how fast you breathe |  |
| 1. the processing of nutrients |  |
| 1. all of the above |  |

1. Blood has four main functions. They are:

Table 3 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. transport, defence, regulation, corpuscular |  |
| 1. transport, deterrence, regulation, clotting |  |
| 1. transport, defence, regulation, clotting | X |
| 1. transport, defence, regurgitation, clotting |  |

1. The small intestine is a component of the:

Table 4 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. stomach |  |
| 1. large intestine |  |
| 1. digestive system | X |
| 1. excretory system |  |

1. The skeletal system:

Table 5 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. supports the body |  |
| 1. consists of bones |  |
| 1. contains connective tissue |  |
| 1. all of the above | X |

1. The heart is a part of the:

Table 6 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. endocrine system |  |
| 1. muscular and cardiovascular system | X |
| 1. lymphatic system |  |
| 1. respiratory and cardiovascular system |  |

1. Immunohaematology is the study of:

Table 7 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. the blood |  |
| 1. blood products |  |
| 1. white blood cells |  |
| 1. the antibodies and antigens on RBC | X |

1. All red blood cells begin life in the:

Table 8 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. veins |  |
| 1. bone marrow | X |
| 1. arteries |  |
| 1. lymph nodes |  |

1. Innate immunity and acquired immunity are described as:

Table 9 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. you are born with innate immunity, acquired immunity comes from an external source | X |
| 1. you are born with acquired immunity, innate immunity comes from an external source |  |
| 1. innate immunity comes naturally, whilst acquired immunity comes at a price |  |
| 1. acquired immunity comes from aging, innate immunity is a function of living in modern society |  |

## Part 2: Short answer

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

1. List the five different types of leucocytes (5 words):

Neutrophils

Eosinophils

Basophils

Monocytes

Lymphocytes

1. List the major blood groups (4 words):

A

B

O

AB

1. List the two types of acquired immunity (2 words):

Passive

Active

1. Describe innate immunity and provide two examples of how the body supports this (15 to 30 words):

Innate immunity is that we are born with, it is our body’s natural defence system.

Any two of the following (i.e. physical barriers **or** skin would be acceptable):

Physical barriers – skin, mucous membranes, cilia, secretions

Physiological barriers – stomach acid, bile, nasal hair, urine, ear wax, normal flora

Cellular barriers – leucocytes, NK cells, inflammation, fever

Cytokine barriers – chemical messengers of immune cells

1. Give two examples of metabolic diseases (2 to 6 words):

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

Thyroid disease, diabetes type 2, crohn’s disease

1. What is cancer (3 to 10 words)?

The first answer is correct, however the other two are acceptable responses.

Abnormal cell growth, tumours, blood diseases

1. Complete the following table on microorganisms and their effect on the human body (1 to 5 words per cell):

Table 10 Complete the table

|  |  |  |
| --- | --- | --- |
| Microorganism: | *E.Coli* | *Yeast* |
| Is it a normal human flora? | yes | yes |
| Can it cause disease? | yes | yes |
| Give an example of a specimen that could contain it. | Any of these is acceptable:  Faeces, poo, urine | Any of these is acceptable:  Skin scrapings, swabs |

1. Give two examples of hormonal diseases and explain which part of the body will be sampled for analysis (5 to 10 words):

Answer may include the following but is not limited to:

Graves disease, cushings syndrome (or any hormonal disease)

Blood samples

1. Explain the role of the large intestine (5 to 20 words):

The function of the large intestine is to absorb water from the remaining indigestible food matter and get rid of waste material from the body.

1. Complete the table below by:
   1. Listing the missing body systems in column A (2 words per cell)
   2. Describing the function of the body systems in column B (4 to 10 words per cell)
   3. Listing two components of that system in column C (2 words per cell)

Table 11 Complete the table

|  |  |  |
| --- | --- | --- |
| System | Functions | Two components or organs in the system |
| Skeletal system | Supports and protects the body | Bones, joints |
| Muscular system | Gives movement to the body | Muscles, tendons, ligaments |
| Digestive system | Takes in and absorbs nutrients and eliminates waste | Any two of the following:  Mouth, teeth, tongue, oesophagus, salivary glands, stomach, duodenum small, intestines, ascending, transverse, descending and sigmoid colon, rectum, anus, appendix, gallbladder, liver, pancreas |
| Nervous system | Controls activities of the body | Brain, spinal cord and nerves |
| Urinary system | Removes waste from the blood, produces and eliminates urine | Any two of the following:  Kidneys, bladder, ureters, urethra |
| Reproductive system | Reproduction of the species | Any two of the following:  Male – prostate gland, ductus deferens, testes, scrotum, penis  Female – ovaries, uterus, fallopian tubes, vagina, mammary glands |
| Respiratory system | Gives the body air to supply oxygen to the cells through the blood and eliminates carbon dioxide | Any two of the following:  Nose, pharynx, larynx, trachea, bronchi, lungs, alveoli |
| Cardiovascular system | Carries food, oxygen, and water to the body cells and removes waste | Heart, blood, arteries, veins, capillaries, bone marrow |
| Endocrine system | Secretes hormones directly into the blood to regulate body function | Thyroid and parathyroid glands, pineal gland, adrenal glands, testes, ovaries, thymus, pancreas, pituitary gland |
| Lymphatic / immune system | Picks up fluid leaked from blood vessels and returns it to blood, disposes of debris in the lymphatic stream houses, white blood cells involved with immunity | Any two of the following:  Bone marrow, thymus, lymphatic vessels, thoracic duct, spleen, lymph nodes |
| Integumentary system | Provides first line of defence against infection, maintains body temperature, gets rid of waste, synthesises Vitamin D | Any two of the following:  Skin, hair, nails, sweat and oil glands |
| Sensory system | Allows the body to detect external stimuli | Any two of the following:  Skin, hands, eyes, nose, ears, mouth |

1. Complete the table below by:
   1. Listing the tissue type in column A (1 to 2 words per cell)
   2. Describing the function of each of the tissue types (1 to 10 words per cell):

Table 12 Complete the table

| Tissue | Type | What is the function of this tissue? |
| --- | --- | --- |
| Muscle | Cardiac | Maintains blood pressure, makes up the heart |
| Skeletal | Attaches to skeletal system, aids in movement |
| Smooth | Regulation of flow through peristalsis |
| Connective tissue | Dense regular | Binding and supporting, protecting |
| Cartilage | Flexible support and binding |
| Adipose | Energy storage, insulation, cushioning |
| Blood | Delivers required chemical components to the body |
| Epithelial tissue | Simple cuboidal | Either or:  Diffusion and filtration  Secretes lubricating substances |
| Simple squamous | Secretes and absorbs |
| Stratified squamous | Protects |