

APPLY KNOWLEDGE OF ANIMAL PHYSIOLOGY

UNIT CODE: 0313 551 05A

TVET CDACC UNIT CODE: HE/OS/AHP/CC/02/6/MA

UNIT DESCRIPTION

This unit specifies the competencies required by an animal health technologist to demonstrate knowledge of animal physiology in managing the health and production of animals. It involves applying knowledge of physiological principles, applying knowledge of the functioning of various body systems and knowledge of environmental physiology.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function.	These are assessable statements which specify the required level of performance for each of the elements. <i>Bold and italicized terms are elaborated in the Range</i>
1. Apply knowledge of physiological principles	1.1. Animal physiological principles are applied as per work procedure 1.2. Animal cell physiology knowledge is applied as per work procedure 1.3. Mammalian cell types knowledge is applied as per work procedure
2. Apply functions of animal body systems knowledge	2.1 Animals tissues physiology knowledge is applied as per work procedure 2.2 Animals organs physiology knowledge is applied as per work procedure 2.3 Animals organ system physiology knowledge is applied as per work procedure
3. Apply knowledge of environmental physiology	4.1 Environmental effects on animal physiology are managed as per work requirement. 4.2 Animal adaptive responses to environment are managed as per work requirement

	4.3 Animal behavioral manifestation to environment are managed as per work requirement
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RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variables	Range
1. Cell components may include but not limited to:	● Mitochondria ● Endoplasmic reticulum ● Nuclei ● Cell membrane ● Cytoplasm
2. Mechanisms of transport across cell membrane may include but not limited to:	● Diffusion ● Solvent drag ● Osmosis ● Filtration ● Active transport ● Exocytosis ● Endocytosis
3. Components of the animal's body systems may include but not limited to:	● Integumentary system ● Cardiovascular system ● Respiratory system ● Renal system ● Musculoskeletal system ● Reproductive system ● Gastro/digestive intestinal ● Central nervous system ● Hepatic system ● Endocrine system ● Lymphatic system

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Organizing skills
- Analytical skills
- Interpersonal skills
- Communication skills
- Evaluation skills
- Problem solving
- Critical thinking

Required Knowledge

The individual needs to demonstrate knowledge of:

- The role of physiology in the broad field of animal health and production.
- Animal anatomy
- Biochemistry

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Applied animal physiological principles as per work procedure 1.2 Applied animal cell physiology knowledge as per work procedure 1.3 Applied mammalian cell types knowledge is as per work procedure 1.4 Applied animal tissues physiology knowledge as per work procedure 1.5 Applied animal organ system physiology knowledge as per work procedure 1.6 Manages environmental effects on animal physiology as per work requirement.
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2. Resource Implications	The following resources must be provided: 2.1 Appropriately simulated environment where assessment can take place 2.2 Access to relevant work environment 2.3 Resources relevant to the proposed activities or tasks
3. Methods of Assessment	Competency may be assessed through: 3.1. Written tests 3.2. Oral questioning 3.3. Observation
4. Context of Assessment	Assessment could be conducted: Workplace or simulated workplace
5. Guidance information for assessment	Holistic assessment with related units in the sector