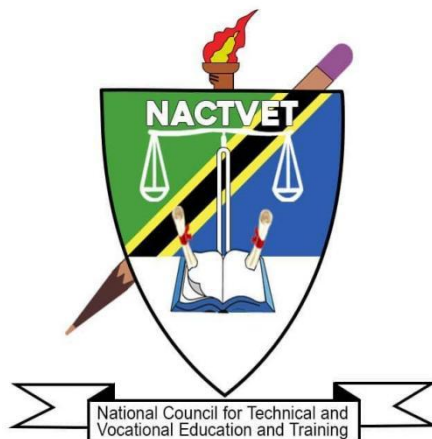


**NATIONAL COUNCIL FOR TECHNICAL AND VOCATIONAL EDUCATION AND
TRAINING**



FEBRUARY 2023

PROPOSED OCCUPATIONAL STANDARDS

OCCUPATION: LIVESTOCK VETERINARY TECHNICIAN

LEVEL: NTA 6

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ABBREVIATIONS

AB	Antibody
AG	Antigen
CBC	Blood Routine Test
CBET	Competency Based Education and Training
FP	Fowl Pox
HA	Hemagglutination Assay
HI	Hemagglutination Inhibition Test
HPAI	High Pathogenic AI
IAP	Immunization Plan
IG	Immunoglobulin
IM	Intramuscular Injection
IV	Intravenous Injection
NACTVET	National Council for Technical and Vocational Education and Training
NOS	National Occupational Standards
OS	OCCUPATIONAL STANDARDS
RBC	Red Blood Cell Count
RV	Rotavirus

TET	Technical Education and Training
TVET	Technical and Vocational Education and Training
WBC	White Blood Cell

GLOSSARY OF TERMS

Circumstantial Knowledge:	Detailed knowledge, which allows the decision-making in regard to different circumstances and cross cutting issues.
Competence:	The ability to use knowledge, understanding, practical, and thinking skills to perform effectively to the workplace standards required in employment.
Competency:	A description of the ability one possesses when able to perform a given occupational task effectively and efficiently.
Competency-based Education:	An instructional programme that derives its content from validated tasks and bases assessment on the learner's performance.
Curriculum:	A description or composite of statements about "what is to be learned" by the trainee/student in a particular instructional programme; a product that states the "intended learning outcomes".
Educational/Training Programme:	The complete curriculum and instruction (what and how) that is designed to prepare a person for employment in a job or other particular performance situation.
Occupation:	A specific position requiring the performance of specific tasks - essentially the same tasks are performed by all employees having the same title. (Example: baker)
Occupational Area:	This is a broad grouping of related jobs. (Example: food service)
Occupational Standards:	Specific requirements of competences for personnel in a particular occupational area, including knowledge and relevant attitudes. They also act as performance tools of assessment of the prescribed outcomes.
Occupational/Job Analysis:	A process used to identify the tasks that are important to employees in any given occupation.
Performance Criteria:	Indicate expected end results or outcomes in the form of evaluative statements.
Skills:	The ability to perform occupational tasks with a high degree of

proficiency within a given occupation. Skill is conceived of as a composite of three completely interdependent components: cognitive, affective, and psychomotor.

- Standards:** A set of statements, which, if proved true under working conditions, means that an individual is meeting an expected level and type of performance.
- Task Analysis:** The process of analysing each task to determine the steps, circumstantial knowledge, attitudes, performance criteria, tools and materials needed, as well as safety concerns required for the employees performing it.
- Task:** A work activity that has a definite beginning and ending, is observable or measurable, consists of two or more definite steps, and leads to products, service, or decisions.
- Underpinning Knowledge:** Crucial knowledge that an individual must acquire in order to demonstrate competences that are associated in performing a given task.
- Verification Process:** The process of having experts review and confirm the importance of the task (competency) statements identified through occupational analysis. Other questions, such as the degree of task learning difficulty are also frequently asked. This process is also sometimes referred to as validation.
- Occupational Competence:** The application of knowledge and skills that consistently meet the standards required by the working conditions.

1.0. INTRODUCTION

Technical Education and Training (TET) is one of the most important education sub-sectors in Tanzania, responsible for developing a skilled workforce to support the country's industrialization economic agenda. Tanzania's *Development Vision 2025* intends to raise the country's economy to a middle-income status. This requires a skilled workforce that is aligned with the needs of the public and private sectors of the economy. The National Council for Technical and Vocational Education and Training of Tanzania has begun the job of drafting Occupational Standards that will eventually be adopted as National Occupational Standards for TET in order to ensure that it meets the needs of the labour market and the country's economic agenda.

National Occupational Standards (NOS) are performance criteria that are matched with labour market demands. Each National Occupational Standard describes functions, performance standards, and knowledge/understanding for one important function or task. They combine skills, knowledge, and attitudes to describe best practice. They are useful tools for establishing job roles, personnel recruiting, supervision, and appraisal, as well as TET standards. They're also helpful for benchmarking and harmonizing qualifications on a national and international level. Standards, in general, provide a solid framework for high-quality TET that is labour market-relevant, current and consistent in delivery across all public and private institutions.

However, it must be noted that, Occupational Standards and Training standards/qualifications standards are different. Occupational Standards are defined in terms of activities performed by a person in a selected occupation (e.g., an electrical engineer designs electrical wiring circuits, performs troubleshooting in electrical wiring, etc.) and they are usually defined by employers following procedures agreed upon by all stakeholders. Education and training standards are developed from the activities defined in occupational standards, and they include learning objectives to ensure that the necessary skills and knowledge are developed by a person to enable him or her to function at an agreed level in an occupation. Education and Training standards are used to define curricula in training institutions. It is however critical that there must be a direct link

between the Occupational Standards and the training standards to respond to demands of the labour market.

In TET delivery, Tanzania adopted the Competence Based Education and Training (CBET) approach. The CBET approach focuses on providing learners with the skills and knowledge required to meet the Occupational Standards. Occupational Standards are thus the starting point for developing competency-based training (CBET) programmes. TET institutions will be required to benchmark their curricula with relevant Occupational Standards.

Occupational Standards are developed based on a given occupation's current and future demands. As a result, they serve as a means of bridging the gap between the worlds of employment and technical education and training (TET).

The Livestock Veterinary Technician Occupation has its own set of occupational standards. The document explains how the Occupational Standards were developed, as well as the scope, the occupational profile in the form of DACUM charts, and the Occupational Standards.

2.0. OCCUPATIONAL STANDARD DEVELOPMENT PROCESS

The Occupational Standards development process began with an examination of major documents that guide Tanzanian skill development. The *10-year National Skills Development Strategy (2016-2026)* was one of the documents reviewed, and it outlined six (6) economic sectors that should be prioritized when developing skills development programmes.

These sectors include: Transport and Logistics, Tourism and Hospitality, Agribusiness, Construction, Energy and ICT. NACTVET labour market reports were also used in the literature review to determine the skills demand in the Tanzanian labour market as a whole.

After the literature review, a workshop comprised of experts and educators with substantial knowledge and experience in the occupation conducted an occupational analysis utilizing the DACUM approach to produce the occupational profile. The analysis resulted in DACUM Charts, which are attached as **Appendix 1** to this document.

The Occupational Standards were then developed. Experts in Occupational Analysis and the Development of Occupational Standards facilitated the workshop. Interviews, online surveys, and a stakeholder forum were used to validate the Occupational Standards. Engineers, supervisory technicians on the job, and experienced Livestock Veterinary Technicians were key informants in the survey to discover occupational trends. The information was used to gain insight from the workplaces regarding trends and changes in the profession, including how well graduates are prepared for working in the occupation. A total of online surveys were completed by experts from the labour market across the country. Apart from the survey aiding in defining the scope for the occupational analysis, they also served to engage a wide cross-section of experts in the occupation. Apart from this, the stakeholders' forum was attended by ... participants from different parts of the country representing various companies.

3.0. THE SCOPE AND OVERVIEW OF THE OCCUPATION STANDARDS FOR LIVESTOCK VETERINARY TECHNICIANS

The standards cover a broad range of duties and tasks that can be performed by a Livestock Veterinary Technician. However, the occupational standards are not meant to replace individual job descriptions. Instead, they are to be used for guidance in defining skill levels and knowledge for the technician in specific settings or positions. The Livestock Veterinary Technician may perform tasks in a number of key areas of the Occupational Standards, but not necessarily in all areas. For example, in large operations, other individuals may be employed or designated to perform specific tasks.

Livestock Veterinary Technicians are responsible for basic operational techniques, including the anatomy, breeding, feed processing, breeding management, vaccination, pharmacology pathology and disease prevention and control of the livestock and poultry (pigs, chickens, cows, horses, rabbits, dogs and cats) and they work under the supervision of Livestock Veterinary Engineers. Generally, the Livestock Veterinary Technician performs the following duties:

- a) Fixation of animal
- b) Sterilization operations
- c) Preparation of experimental materials;
- d) Basic clinical examination
- e) Biosafety protection
- f) Appearance identification and health evaluation
- g) Immunization and immunization effect monitoring
- h) Collection and delivery of blood samples
- i) Use of common instruments
- j) Storage of drugs and reagents, and drug compatibility and administration technique
- k) Inspection and handling of animals and animal products
- l) Feed processing and formula design
- m) Estrus identification and artificial insemination technique
- n) Collection and delivery of pathological tissue samples
- o) Examination of parasites
- p) Clinical tests
- q) Necropsy
- r) Inspection and handling after slaughtering

s) Feeding and management of livestock and poultry

The Occupational Standards have been clustered into NTA qualification levels, i.e. NTA 4- 6.

4.0. VALIDITY PERIOD

Due to the rapid development of technology, the validity period of occupational standards is 3-5 years. The review will proceed in the same manner as the one before it, with new occupational standards being developed based on current trends of the labour market.

5.0. OCCUPATIONAL STANDARDS

**5.1 OCCUPATIONAL STANDARDS FOR LIVESTOCK VETERINARY TECHNICIAN -
NTA 6**

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	MONITOR OF IMMUNIZATION EFFECT	DUTY NO.	601
TASK TITLE	TREATMENT OF ADVERSE IMMUNIZATION REACTION	TASK NO.	6011
PERFORMANCE CRITERIA	The person performing this task must be able to properly handle the animal immunization reactions.		
RANGE STATEMENT	<p>The task can be performed on livestock farm under the supervision of senior animal husbandry and veterinary engineers.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Veterinary thermometer; 2. Stethoscope; 3. Disposable syringe; 4. Personal protective equipment, such as masks, disposable latex gloves, and protective clothing; 5. Platform scales or weighting scales; 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Select appropriate tools and equipment; 2. Identify the different types of adverse immunization reactions; 3. Measure body temperature of animal; 4. Identify breathing and heart sounds of animal; 5. Weigh and calculate the dosage of drugs; 6. Give muscle injection; 7. Give subcutaneous injection; 8. Give venipuncture; 9. Care animals; 10. Clean the tools, equipment and the workplace; 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Prepare response plans for the following different types of adverse immunization reactions: Normal reactions, severe reactions, and comorbidity; 1.2 Calculate the dosage of drugs. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Reasons of adverse immunization reactions; 2.2 Response plans for adverse immunization reactions and its significance. 	

<p>11. Store drugs, tools and equipment safely.</p>	<p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Instructions for selection and application of drugs.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Alleviate or eliminate adverse immunization reaction of animals in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Knowledge of animal immunization; 2. Animal pharmacological knowledge; 3. Biosafety; 4. Methods for disposal of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	MONITOR OF IMMUNIZATION EFFECT	DUTY NO.	601
TASK TITLE	EVALUATION OF IMMUNIZATION POTENCY	TASK NO.	6012
PERFORMANCE CRITERIA	The person performing this task must be able to perform assessment on animal immunization titer in accordance with technical requirements.		
RANGE STATEMENT	<p>The task can be performed on livestock farm under the supervision of senior animal husbandry and veterinary engineers.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Veterinary hemostix; 2. Electrothermostat; 3. Benchtop low-speed centrifuge; 4. Pipette; 5. 96-hole V-type coagulation board; 6. ELIASA; 7. Tray balance; 8. Oscillator; 9. Masks and disposable latex gloves; 10. Protective clothing; 11. Refrigerator. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe biosafety measures; 2. Select appropriate operation tools and equipment; 3. Select appropriate detect methods according to different antibody detection object; 4. Take blood collection from poultry wing veins; 5. Take blood collection from porcine anterior vena cava; 6. Take blood collection from jugular veins of cattle and sheep; 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Select appropriate detect methods according to different antibody detection object; 1.2 Take serum agglutination test; 1.3 Take haemagglutination-hemagglutination inhibition test; 1.4 Perform the enzyme-linked immunosorbent assay; 1.5 Take antibody result analysis. 	

<ol style="list-style-type: none"> 7. Take blood collection from oxtail vein; 8. Separate and preserve serum; 9. Test serum agglutination; 10. Test hemagglutination- hemagglutination inhibition; 11. Test enzyme-linked immunosorbent; 12. Clean the disinfection tools, equipment and workplace; 13. Store tools and equipment safely. 	<p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Principle of antigen-antibody specific reaction; 2.2 Principle of agglutination test. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <ol style="list-style-type: none"> 3.1 Animal immunoassay detect method; 3.2 Blood circulation law of animals. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Instrument operation skills; 4.2 Customer service skills; 4.3 Teamwork skills; 4.4 Report writing skills.
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>The antibody level test and assessment of immunizing potency of vaccine are conducted in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Knowledge of animal immunization; 2. Animal pharmacological knowledge; 3. Biosafety; 4. Methods for disposal of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	MONITOR OF IMMUNIZATION EFFECT	DUTY NO.	601
TASK TITLE	PREPARATION OF IMMUNIZATION PROGRAMME	TASK NO.	6013
PERFORMANCE CRITERIA	The person performing this task must be able to prepare animal immunization programmes in accordance with technical requirements.		
RANGE STATEMENT	The task can be performed on livestock farm under the supervision of senior animal husbandry and veterinary engineers. The tools and equipment to be used include: 1. Desktop or laptop computer; 2. Printer.		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Investigate animal species, uses and local epidemic situation; 2. Evaluate the maternal antibody level of animals; 3. Evaluate the residual antibody level caused by the last immunization; 4. Select the type of vaccine; 5. Select the immunization method. 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Prepare immunization plan. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Attenuated vaccine Immunization; 2.2 Inactivated vaccine immunization; 2.3 Vaccine immune interference. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <ol style="list-style-type: none"> 3.1 Regularity of immune response; 3.2 Epidemiological investigation standards. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Instrument operation skills; 4.2 Customer service skills; 4.3 Teamwork skills; 4.4 Report writing skills. 	
DESCRIPTION OF THE END		Appropriate and applicable immunization procedures	

PRODUCT / SERVICE	are prepared in accordance with technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: <ol style="list-style-type: none">1. Knowledge of animal immunization;2. Animal pharmacological knowledge;3. Biosafety;4. Methods for disposal of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	COLLECTION AND DELIVERY OF PATHOLOGICAL TISSUE SAMPLES	DUTY NO.	602
TASK TITLE	COLLECTION AND PRESERVATION OF PATHOLOGICAL TISSUE SAMPLES	TASK NO.	6021
PERFORMANCE CRITERIA	The person performing this task must be able to perform collection and preservation of animal pathological samples in accordance with technical requirements		
RANGE STATEMENT	<p>The task can be performed on livestock farm under the supervision of senior animal husbandry and veterinary engineers.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Scalpel; 2. Operating scissors; 3. Tweezer; 4. Glass bottle; 5. Alcohol burner; 6. Masks and disposable latex gloves; 7. Protective clothing; 8. Protective mask. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe biosafety measures; 2. Select appropriate operation tools and equipment; 3. Select suitable pathological samples for different diseases; 4. Dissect poultry in a pathological manner; 5. Dissect pigs in a pathological manner; 6. Dissect ruminants in a pathological manner; 7. Prepare fixation fluid for pathological samples; 8. Label, package and transport 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Dissect poultry in a pathological manner; 1.2 Dissect pigs in a pathological manner; 1.3 Dissect ruminants in a pathological manner; 1.4 Prepare fixation fluid for pathological samples. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Collection and preservation principles of pathological tissue samples 		

<p>pathological samples;</p> <p>9. Clean the tools, equipment and workplace;</p> <p>10. Store tools and equipment safely.</p>	<p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Animal pathological anatomy methods;</p> <p>3.2 Collection methods of animal pathological tissue;</p> <p>3.3 Preservation methods of animal pathological tissues.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Pathological tissue samples are collected correctly and stored reasonably in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Animal anatomical structure; 2. Pathological changes of animal diseases; 3. Biosafety; 4. Methods for disposal of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	COLLECTION AND DELIVERY OF PATHOLOGICAL TISSUE SAMPLES	DUTY NO.	602
TASK TITLE	COLLECTION AND PRESERVATION OF SAMPLES ANALYZING PATHOGEN	TASK NO.	6022
PERFORMANCE CRITERIA	The person performing this task must be able to perform collection and preservation of animal pathological samples of epidemic diseases in accordance with technical requirements.		
RANGE STATEMENT	<p>The task can be performed on livestock farm under the supervision of senior animal husbandry and veterinary engineers.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Sterilizing scalpel; 2. Sterilizing surgical scissors; 3. Sterilized tweezers; 4. Sterilized glass bottle/capped centrifuge tube/plate; 5. Autoclave; 6. Refrigerator/freezer; 7. Alcohol burner; 8. Injector; 9. Masks and disposable latex gloves; 10. Protective clothing; 11. Protective mask. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe biosafety measures; 2. Select appropriate operation tools and equipment for this task; 3. Select suitable pathogen analysis samples for different animal diseases; 4. Dissect poultry in a pathological manner; 5. Dissect pigs in a pathological manner; 6. Dissect ruminants in a pathological 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Dissect poultry in a pathological manner; 1.2 Dissect pigs in a pathological manner; 1.3 Dissect ruminants in a pathological manner; 1.4 Prepare anticoagulant, phosphate buffer and Hank's solution; 1.5 Collect animal blood; 		

<p>manner;</p> <ol style="list-style-type: none"> 7. Prepare anticoagulant, phosphate buffer and Hank's solution; 8. Collect animal blood; 9. Isolate serum; 10. Clean the tools, equipment and the workplace; 11. Store reagents, tools and equipment safely. 	<p>1.6 Isolate serum.</p> <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <p>2.1 Principles of collection and preservation of pathogen analysis samples.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <ol style="list-style-type: none"> 3.1 Animal pathological anatomy methods; 3.2 Collection methods of animal pathogenic analysis; 3.3 Preservation methods of animal pathogenic analysis tissues. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Instrument operation skills; 4.2 Customer service skills; 4.3 Teamwork skills; 4.4 Report writing skills.
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Pathogen analysis samples are collected correctly and stored reasonably in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Animal anatomical structure; 2. Pathological changes of animal epidemic diseases; 3. Biosafety; 4. Methods for disposal of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	COLLECTION AND DELIVERY OF PATHOLOGICAL TISSUE SAMPLES	DUTY NO.	602
TASK TITLE	TRANSPORT OF SAMPLES	TASK NO.	6023
PERFORMANCE CRITERIA	The person performing this task must be able to transport samples in accordance with technical requirements.		
RANGE STATEMENT	<p>The task can be performed on livestock farm under the supervision of senior animal husbandry and veterinary engineers.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Sterilizing scalpel; 2. Sterilizing surgical scissors; 3. Sterilized tweezers; 4. Sterilized glass bottle/capped centrifuge tube/plate; 5. Autoclave; 6. Paraffin wax; 7. Sealing film; 8. Biological ice pack; 9. Dried ice; 10. Marking pen; 11. Label paper; 12. Masks and disposable latex gloves; 13. Protective clothing; 14. Protective mask. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe biosafety measures; 2. Select appropriate operation tools and equipment; 3. Select different packing ways for different samples 4. Select different delivering ways for different samples 5. Clean the disinfection tools, equipment 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Tag sample; 1.2 Pack sample; 1.3 Deliver sample. <p>2.0 Principle</p> <p>The person performing this task must be able to</p>	

<p>and workplace;</p> <p>6. Store tools and equipment safely.</p>	<p>explain the following principles:</p> <p>2.1 Necessity of tagging samples;</p> <p>2.2 Necessity of delivering samples correctly.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Biosafety methods for sample packaging and transportation.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Proper marking, packaging and delivery of samples are conducted.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <p>1. Knowledge of histopathological fixation;</p> <p>2. Preservation of pathogen analysis samples;</p> <p>3. Biosafety;</p> <p>4. Methods for disposal of medical waste.</p>

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	PARASITE EXAMINATION	DUTY NO.	603
TASK TITLE	EXAMINATION OF WORM EGGS, LARVAE AND COCCIDIA OOCYSTS IN FECES	TASK NO.	6031
PERFORMANCE CRITERIA	The person performing this task must be able to inspect worm eggs, larvae and coccidia oocysts in feces according to operating procedures and parasite detection standards.		
RANGE STATEMENT	<p>The task can be performed in the laboratory under the supervision of a senior Livestock Veterinary Technician or a Licensed Veterinarian.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Microscope; 2. Electronic balance; 3. Tray balance; 4. Low speed centrifuge; 5. 1 mL pipettor; 6. Microscope; 7. Manual counter; 8. Consumables, such as beakers, glass slides, cover slides, 60-mesh screens, glass rods, 15 mL centrifuge tubes, self-made wire rings (or bacterial inoculation rings), and McMaster counting plates; 9. Reagents, such as saturated salt water and cedar oil; 10. Personal protective equipment, such as gloves, masks, and work clothes. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate instruments, equipment and consumables; 3. Configure the required standard reagents; 4. Collect and identify fecal samples; 5. Direct smear observation under microscope; 6. Choose appropriate methods for testing items; 7. Observe microscope; 8. Record the observation results; 9. Judge the result; 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Collect and identify fecal samples. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Aseptic standard; 2.2 Standard of collecting different types of detection indicators. 	

<p>10. Shut down instruments and equipment, clean countertops and workplaces;</p> <p>11. Handle consumables and test objects safely.</p>	<p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Morphological characteristics of worm eggs and larvae in feces;</p> <p>3.2 Morphological characteristics of coccidia eggs in feces;</p> <p>3.3 Morphological characteristics of other objects in feces;</p> <p>3.4 Inspection methods of worm eggs and larvae in feces;</p> <p>3.5 Clinical significance of examination of helminth eggs and larvae in feces;</p> <p>3.6 Direct smear method;</p> <p>3.7 Concentration method;</p> <p>3.8 Floating method;</p> <p>3.9 Precipitation method;</p> <p>3.10Hatching method.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Worm eggs, larvae and coccidia oocysts in feces are inspected according to the detection purpose and technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Correct operation of microscopes and other instruments; 2. Standard configuration of reagents such as saturated brine; 3. Correct implementation of detection methods; 4. Occupational health and safety; 5. Disposal methods of detection waste and consumables.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	PARASITE EXAMINATION	DUTY NO.	603
TASK TITLE	EXAMINATION OF PARASITES IN SCRAPED OBJECTS OF SKIN	TASK NO.	6032
PERFORMANCE CRITERIA	The person performing this task must be able to check for parasites in scraped objects of skin according to operating procedures and parasite detection standards.		
RANGE STATEMENT	<p>The task can be performed in the laboratory under the supervision of a senior Livestock Veterinary Technician or a Licensed Veterinarian.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Microscope; 2. Electronic balance; 3. Tray balance; 4. Low speed centrifuge; 5. Pipette; 6. Microscope; 7. Manual counter; 8. Consumables, such as scalpels, cellophane, beakers, glass slides, cover slides, screens, glass rods, 15 mL centrifuge tubes, self-made wire rings (or bacterial inoculation rings), and McMaster counting plates; 9. Reagents, such as normal saline, 10%NaOH, saturated salt water and cedar oil; 10. Personal protective equipment, such as gloves, masks, and work clothes. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate instruments, equipment and consumables; 3. Configure the required standard reagents; 4. Scrape dander tissue sample; 5. Observe smear; 6. Choose appropriate methods for testing items; 7. Observe results; 8. Record the observation results; 9. Judge the result; 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Collect and mark dander tissue sample; 1.2 Check the map of skin parasites. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Aseptic standard; 2.2 Standard of collecting different types of detection indicators. 	

<p>10. Shut down instruments and equipment, clean countertops and workplaces;</p> <p>11. Handle consumables and test objects safely.</p>	<p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Morphological characteristics of parasites in scraped objects of skin;</p> <p>3.2 Morphological characteristics of other objects in scraped objects of skin;</p> <p>3.3 Examination method of parasites in scraped objects of skin;</p> <p>3.4 Clinical significance of examining parasites in scraped objects of skin;</p> <p>3.6 Direct inspection method;</p> <p>3.7 Scraping method;</p> <p>3.8 Extrusion smear method;</p> <p>3.9 Scotch tape adhesion method;</p> <p>3.10 Microscopic observation.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Parasites in scraped objects of skin are checked according to the detection purpose and technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Correct operation of microscopes and other instruments; 2. Standard configuration of reagents such as 10%NaOH; 3. Correct implementation of detection methods; 4. Occupational health and safety; 5. Disposal methods of detection waste and consumables.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	PARASITE EXAMINATION	DUTY NO.	603
TASK TITLE	EXAMINATION OF PARASITE IN ORGANS AND TISSUES	TASK NO.	6033
PERFORMANCE CRITERIA	The person performing this task must be able to check for parasites in organs and tissues according to operating procedures and parasite detection standards.		
RANGE STATEMENT	<p>The task can be performed in the laboratory under the supervision of a senior Livestock Veterinary Technician or a Licensed Veterinarian.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Microscope; 2. Electronic balance; 3. Tray balance; 4. Low speed centrifuge; 5. 1 mL pipettor; 6. Microscope; 7. Manual counter; 8. Consumables, such as beakers, glass slides, cover slides, screens, glass rods, 15 mL centrifuge tubes, self-made wire rings (or bacterial inoculation rings), and McMaster counting plates; 9. Reagents, such as saturated salt water and cedar oil; 10. Personal protective equipment, such as gloves, masks, and work clothes. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate instruments, equipment and consumables; 3. Configure the required standard reagents; 4. Collect pathological materials of tissues and organs; 5. Choose appropriate methods for testing 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Collect pathological materials of tissues and organs; 1.8. Check the map of parasites in tissues and organs. <p>2.0 Principle</p>		

<p>items;</p> <ol style="list-style-type: none"> 6. Observe results; 7. Record the observation results; 8. Judge the result; 9. Shut down instruments and equipment, clean countertops and workplaces; 10. Handle consumables and test objects safely. 	<p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Aseptic standard; 2.2 Standard of collecting different types of detection indicators. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <ol style="list-style-type: none"> 3.1 Morphological characteristics of parasites in organs and tissues; 3.2 Examination methods of parasite in organs and tissues; 3.3 Clinical significance of examining parasites in organs and tissues; 3.4 Secretion smear method; 3.5 Microscopic examination of smear; 3.6 Venipuncture smear method; 3.7 Microscopic examination of tableting; 3.8 Muscle digestion method. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Instrument operation skills; 4.2 Customer service skills; 4.3 Teamwork skills; 4.4 Report writing skills.
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Parasites in organs and tissues are checked according to the detection purpose and technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Correct operation of microscopes and other instruments; 2. Standard configuration of reagents; 3. Correct implementation of detection methods; 4. Occupational health and safety; 5. Disposal methods of detection waste and consumables.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	PARASITE EXAMINATION	DUTY NO.	603
TASK TITLE	EXAMINATION OF PROTOZOON AND WORMS LARVAE IN BLOOD	TASK NO.	6034
PERFORMANCE CRITERIA	The person performing this task must be able to check for parasites in organs and tissues according to operating procedures and parasite detection standards.		
RANGE STATEMENT	<p>The task can be performed in the laboratory under the supervision of a senior Livestock Veterinary Technician or a Licensed Veterinarian.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Microscope; 2. Electronic balance; 3. Tray balance; 4. Low speed centrifuge; 5. Pipette; 6. Microscope; 7. Manual counter; 8. Consumables, such as beakers, glass slides, cover slides, glass rods, centrifuge tube; 9. Reagents, such as saturated salt water and cedar oil; 10. Personal protective equipment, such as gloves, masks, and work clothes. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate instruments, equipment and consumables; 3. Configure the required standard reagents; 4. Collect and identify blood samples; 5. Choose appropriate inspection methods for testing items; 6. Observe results; 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Collect and mark blood samples; 1.2 Check the map of protozoon and worms larvae in blood. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Aseptic standard; 	

<p>7. Record results;</p> <p>8. Judge the result;</p> <p>9. Shut down instruments and equipment, clean countertops and workplaces;</p> <p>10. Handle consumables and test objects safely.</p>	<p>2.2 Standard of collecting different types of detection indicators.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Morphological characteristics of protozoon and worm's larvae in blood</p> <p>3.2 Methods of examining protozoon and worm's larvae in blood;</p> <p>3.3 Clinical significance of examining protozoon and worm's larvae in blood</p> <p>3.4 Blood smear method;</p> <p>3.5 Blood pressure drop;</p> <p>3.6 Insect concentration;</p> <p>3.7 Hemolysis check.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Protozoon and worm larvae are checked in blood according to the detection purpose and technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Correct operation of microscopes and other instruments; 2. Standard configuration of reagents such as saturated brine; 3. Correct implementation of detection methods; 4. Occupational health and safety; 5. Disposal methods of detection waste and consumables.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	CLINICAL VALIDATION	DUTY NO.	604
TASK TITLE	BLOOD ROUTINE EXAMINATION	TASK NO.	6041
PERFORMANCE CRITERIA	The person performing this task must be able to perform blood routine examination according to operating procedure and blood routine standard index.		
RANGE STATEMENT	<p>The task can be performed in the laboratory under the supervision of a senior Livestock Veterinary Technician or a Licensed Veterinarian.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Microscope; 2. Automatic blood cell analyzer; 3. Consumables, such as beakers, glass slides, cover slides, glass rods, centrifuge tube, blood lancet, cotton swab; 4. Reagents, such as alcohol, saline, anticoagulant, Giemsa stain, Wright Stain; 5. Personal protective equipment, such as gloves, masks, and work clothes. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate instruments, equipment and consumables; 3. Configure the required standard reagents; 4. Collect and mark blood samples; 5. Preserve and transport blood samples; 6. Choose appropriate inspection methods for testing items; 7. Observe results; 8. Record the results; 9. Judge the result; 10. Shut down instruments and equipment, clean countertops and workplaces; 11. Handle consumables and test objects 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Collect and mark blood samples; 1.2 Preserve and transport blood samples; 1.3 Prepare and observe blood smears after staining; 1.4 Use automatic blood cell analyzer; 1.5 Check coagulation function and observe the blood component map. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Aseptic standard; 2.2 Standard of collecting different types of detection indicators. 	

safely.	<p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Principles and methods of blood routine test</p> <p>3.2 Characters and physiological constants of blood of healthy animals;</p> <p>3.3 Clinical significance of blood routine examination indicators;</p> <p>3.4 Use method of instruments and equipment.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Instrument operation skills;</p> <p>4.4 Inspection report writing skills.</p>
DESCRIPTION OF THE END PRODUCT / SERVICE	Blood routine examination is performed according to detection purpose and technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Correct operation of hematology analyzer and other instruments; 2. Standard configuration of reagents; 3. Correct implementation of detection methods; 4. Occupational health and safety; 5. Disposal methods of detection waste and consumables.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	CLINICAL VALIDATION	DUTY NO.	604
TASK TITLE	URINE ROUTINE EXAMINATION	TASK NO.	6042
PERFORMANCE CRITERIA	The person performing this task must be able to perform urine routine examination according to operating procedure and urine routine standard index.		
RANGE STATEMENT	<p>The task can be performed in the laboratory under the supervision of a senior Livestock Veterinary Technician or a Licensed Veterinarian.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Microscope; 2. Urine analyzer; 3. Alcohol burner; 4. Test tube clamp; 5. Consumables, such as beakers, glass slides, cover slides, glass rods, centrifuge tubes, sampling cup, catheter, PH test paper; 6. Reagents, such as disinfectant, preservative, Giemsa stain, Wright Stain and cedar oil; 7. Personal protective equipment, such as gloves, masks, and work clothes. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate instruments, equipment and consumables; 3. Configure the required standard reagents; 4. Collect and preserve urine samples; 5. Choose appropriate methods for testing items; 6. Observe results; 7. Record results; 8. Judge results; 9. Shut down instruments and 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Collect and number urine samples; 1.2 Store and transport urine samples; 1.3 Check blood component map. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Aseptic standard; 2.2 Standard of collecting different types of detection indicators. 		

<p>equipment, clean countertops and workplaces;</p> <p>10. Handle consumables and test objects safely.</p>	<p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Principles and methods of urine examination;</p> <p>3.2 Characters and physiological constants of urine of healthy animals;</p> <p>3.3 Clinical significance of urine indicators;</p> <p>3.4 The proper use of instruments and equipment;</p> <p>3.5 Urine sensory examination method;</p> <p>3.6 Urine and SG examination method;</p> <p>3.7 Test paper examination method;</p> <p>3.8 Urine protein boiling and acid adding method;</p> <p>3.9 Sulfosalicylic acid method;</p> <p>3.10 Blood in urine benzidine method;</p> <p>3.11 Urine chemical analyzer method;</p> <p>3.12 Urine glucose test paper method;</p> <p>3.13 Ketone body sodium nitroferricyanide method.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Urine examination is performed according to detection purpose and technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Correct operation of urine analyzer and other instruments; 2. Standard configuration operation of reagents such as sodium nitroferricyanide; 3. Correct implementation of detection methods; 4. Occupational health and safety; 5. Disposal methods of detection waste and consumables.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	CLINICAL VALIDATION	DUTY NO.	604
TASK TITLE	FECES ROUTINE EXAMINATION	TASK NO.	6043
PERFORMANCE CRITERIA	The person performing this task must be able to perform feces routine examination according to operating procedure and feces routine standard index.		
RANGE STATEMENT	<p>The task can be performed in the laboratory under the supervision of a senior Livestock Veterinary Technician or a Licensed Veterinarian.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Microscope; 2. Consumables, such as beakers, glass slides, cover slides, glass rods, centrifuge tube, occult blood qualitative test kit, screens; 3. eagents, such as normal saline, benzidine; 4. Personal protective equipment, such as gloves, masks, and work clothes. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the safety and health prevention measures; 2. Choose appropriate instruments, equipment and consumables; 3. Collect and identify fecal samples; 4. Check the physical properties of feces; 5. Check the composition of fecal impurities; 6. Judge the result; 7. Shut down instruments and equipment, clean countertops and workplaces; 8. Handle consumables and test objects safely. 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Collect and identify fecal samples; 1.2 Number and handle fecal samples. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Aseptic standard; 2.2 Standard of collecting different types of detection indicators. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <ol style="list-style-type: none"> 3.1 Contents and principles of feces examination; 		

	<p>3.2 Characters and physiological constants of feces of healthy animals;</p> <p>3.3 Clinical significance of feces examination indicators;</p> <p>3.4 Method for determination of acidity and basicity of feces;</p> <p>3.5 Occult blood test of feces;</p> <p>3.6 Impurities inspection smear method.</p> <p>4.0 Essential Skills</p> <p>4.1 Instrument operation skills;</p> <p>4.2 Customer service skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
DESCRIPTION OF THE END PRODUCT / SERVICE	Feces examination is performed according to detection purpose and technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Correct operation of microscopes and other testing instruments; 2. Standard configuration of reagents; 3. Correct implementation of detection methods; 4. Occupational health and safety; 5. Disposal methods of detection waste and consumables.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	CLINICAL VALIDATION	DUTY NO.	604
TASK TITLE	BIOCHEMICAL EXAMINATION	TASK NO.	6044
PERFORMANCE CRITERIA	The person performing this task must be able to perform biochemical examination according to operating procedure and animal biochemical standard index.		
RANGE STATEMENT	<p>The task can be performed in the laboratory under the supervision of a senior Livestock Veterinary Technician or a Licensed Veterinarian.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Microscope; 2. Blood biochemical analyzer; 3. Electronic balance; 4. Tray balance; 5. Low speed centrifuge; 6. Pipette; 7. Consumables, such as beakers, glass slides, cover slides, glass rods, centrifuge tube, blood lancet, cotton swab; 8. Reagents, such as alcohol, saline, anticoagulant; 9. Personal protective equipment, such as gloves, masks, and work clothes. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the safety and health prevention measures; 2. Choose appropriate instruments, equipment and consumables; 3. Collect and identify blood samples; 4. Preserve and transport blood samples; 5. Check the physical properties of urine; 6. Check the chemical composition of urine; 7. Check urine sediment; 8. Judge results; 9. Shut down instruments and equipment, clean countertops and workplaces; 10. Handle consumables and test 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Collect and mark blood samples; 1.2 Preserve and transport blood samples; 1.3 Treat blood samples. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Aseptic standard; 2.2 Standard of collecting different types of detection indicators. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <ol style="list-style-type: none"> 3.1 Principles and methods of biochemical examination; 		

<p>objects safely.</p>	<p>3.2 Clinical significance of biochemical indicators; 3.3 Liver function examination; 3.4 Renal function examination; 3.5 Blood lipid and blood glucose examination; 3.6 Cardiac enzyme examination; 3.7 Ion detection method; 3.8 Blood biochemical analyzer method.</p> <p>4.0 Essential Skills 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills; 4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Biochemical examination is performed according to detection purpose and technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Correct operation of blood biochemical analyzer and other instruments; 2. Standard configuration of reagents; 3. Correct implementation of detection methods; 4. Occupational health and safety; 5. Disposal methods of detection waste and consumables.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	NECROPSY	DUTY NO.	605
TASK TITLE	STANDARD ANATOMY OF LIVESTOCK AND POULTRY CARCASSES	TASK NO.	6051
PERFORMANCE CRITERIA	The person performing this task must be able to carry out standardized necropsy on livestock and poultry carcasses according to the technical requirements of livestock and poultry carcass autopsy.		
RANGE STATEMENT	<p>The task can be performed in the autopsy room of livestock and poultry carcass under the supervision of senior Livestock Veterinary Technician, and can also be carried out outdoors if conditions do not permit.</p> <p>The instruments and drugs to be used include:</p> <ol style="list-style-type: none"> 1. Knivers (peeling knives, scalpels, surgical knives); 2. Scissors (surgical scissors, intestinal scissors, bone shears); 3. Tweezer; 4. Bone saws; 5. Axe; 6. Sharpening steel; 7. Grindstone; 8. Disinfectants; 9. Fixation fluid; 10. Container for storing pathological tissues; 11. Porcelain plate (basin or jar); 12. Record books; 13. Pens; 14. Camera; 15. Personal protective equipment. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Choose appropriate equipment and drugs; 2. Choose the time and place of autopsy; 3. Investigate the medical history; 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Dissect and examine carcasses of cattle, sheep, pigs, poultry and rabbits; 1.2 Collect, pack and send pathological material for 		

<ol style="list-style-type: none"> 4. Eliminate anthrax; 5. Identify changes in corpses; 6. Check the body surface; 7. Peel and examine subcutaneous tissue; 8. Open and examine the abdominal cavity; 9. Open and examine the chest cavity; 10. Open and examine the cranial cavity; 11. Open and examine the nasal cavity; 12. Examine muscles, joints and bone marrow; 13. Collect, pack and send pathological material for examination; 14. Record the necropsy results; 15. Disinfect and take proper personal protection; 16. Treat livestock and poultry carcass in a harmless way. 	<p>examination;</p> <ol style="list-style-type: none"> 1.3 Record autopsy findings; 1.4 Treat corpses in a harmless way. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Purpose and significance of necropsy of livestock and poultry carcass; 2.2 Procedures of necropsy of livestock and poultry; 2.3 Changes of necropsy of livestock and poultry. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following:</p> <ol style="list-style-type: none"> 3.1 Precaution of necropsy; 3.2 Different necropsy methods of livestock and poultry carcasses; 3.3 Observation and recording methods of cadaver lesions. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Communication skills; 4.2 Teamwork skills; 4.3 Practical operation skills; 4.4 Report writing skills; 4.5 Entrepreneurial skills.
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Pathological anatomical diagnosis is made, the causes of animal morbidity and death are explained, and prevention and control suggestions are put forward in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Standardized operation of necropsy; 2. Safe use of instruments and medicines; 3. Self-protection measures of autopsy personnel; 4. Disposal of instruments and supplies after autopsy; 5. Disposal of corpses and sites after autopsy.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	NECROPSY	DUTY NO.	605
TASK TITLE	IDENTIFICATION OF LIVESTOCK AND POULTRY ORGAN LESIONS	TASK NO.	6052
PERFORMANCE CRITERIA	The person performing this task must be able to identify the animal and poultry organ lesions according to the technical requirements of animal and poultry organ lesion identification.		
RANGE STATEMENT	<p>The task can be performed in the autopsy room of livestock and poultry carcass under the supervision of senior Livestock Veterinary Technician, and can also be carried out outdoors if conditions do not permit.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Knivers (peeling knives, scalpels, surgical knives); 2. Scissors (surgical scissors, intestinal scissors, bone shears); 3. Tweezer; 4. Bone saws; 5. Axe; 6. Sharpening steel; 7. Grindstone; 8. Disinfectants; 9. Fixation fluid; 10. Container for storing pathological tissues; 11. Porcelain plate (basin or jar); 12. 1Record books; 13. Pens; 14. Camera; 15. Personal protective equipment. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Choose appropriate equipment and drugs; 2. Identify lymph node lesions; 3. Identify lung lesions; 4. Identify heart disease lesions; 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Examine organs and tissues; 1.2 Collect, pack and send pathological material for examination; 		

<p>5. Identify splenic lesions;</p> <p>6. Identify liver lesions;</p> <p>7. Identify renal lesions;</p> <p>8. Identify gastric lesions;</p> <p>9. Identify intestinal lesions;</p> <p>10. Identify pelvic organ lesions;</p> <p>11. Identify brain and spinal cord lesions;</p> <p>12. Collect, pack and send pathological material for examination;</p> <p>13. Record the necropsy findings of each organ;</p> <p>14. Disinfect and take proper personal protection;</p> <p>15. Treat livestock and poultry viscera in a harmless way.</p>	<p>1.3 Record the necropsy findings of each organ;</p> <p>1.4 Treat livestock and poultry viscera in a harmless way.</p> <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <p>2.1 Normal anatomical structure of various organs of livestock and poultry</p> <p>2.2 Pathological changes of various organs of livestock and poultry.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Pathological changes of common organs of livestock and poultry;</p> <p>3.2 Comprehensive observation of organ lesions of livestock and poultry;</p> <p>3.3 Objective description and detailed record of organ lesions of livestock and poultry.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Teamwork skills;</p> <p>4.3 Practical operation skills;</p> <p>4.4 Report writing skills;</p> <p>4.5 Entrepreneurial skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Pathological anatomical diagnosis is made, the causes of animal morbidity and death are explained, and prevention and control suggestions are put forward in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <p>1. Standardized operation of viscera autopsy;</p> <p>2. Safe use of instruments and medicines;</p> <p>3. Self-protection measures of autopsy personnel;</p> <p>4. Disposal of instruments and supplies after autopsy;</p> <p>5. Disposal of corpses and sites after autopsy.</p>

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	NECROPSY	DUTY NO.	605
TASK TITLE	IDENTIFICATION OF ANIMAL EPIDEMIC DISEASES BY OBSERVING TYPICAL LESIONS	TASK NO.	6053
PERFORMANCE CRITERIA	The person performing this task must be able to identify animal epidemic disease by observing typical lesions.		
RANGE STATEMENT	<p>The task can be performed in pathology laboratory under the supervision of senior Livestock Veterinary Technician.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Knivers (peeling knives, scalpels, surgical knives); 2. Scissors (surgical scissors, intestinal scissors, bone shears); 3. Tweezer; 4. Disinfectants; 5. Microscope; 6. Refrigerator; 7. Paraffin slicer; 8. Staining solution; 9. Dehydration agent; 10. Transparent agent; 11. Fixation fluid; 12. Record books; 13. Pens; 14. Camera; 15. Personal protective equipment. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Choose appropriate equipment and drugs; 2. Observe typical lesions; 3. Collect, pack and send pathological material for examination; 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Observe the lesions with naked eyes; 1.2 Observe the lesions with microscope; 1.3 Collect, pack and send pathological material for examination; 		

<ol style="list-style-type: none"> 4. Make paraffin slices; 5. Stain; 6. Observe typical lesions with microscope; 7. Record typical lesions; 8. Analyze typical lesions; 9. Identify animal epidemic diseases; 10. Disinfect and take proper personal protection; 11. Treat diseased organs in a harmless way. 	<ol style="list-style-type: none"> 1.4 Make paraffin sections and stain them; 1.5 Analyze lesions; 1.6 Treat diseased viscera in a harmless way. <p>2.0 Principle The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Normal anatomical structure and tissue structure of livestock and poultry organs; 2.2 Typical ocular and microscopic lesions of animal diseases. <p>3.0 Theories The person performing this task must be able to explain the following:</p> <ol style="list-style-type: none"> 3.1 Typical lesions of various animal epidemic diseases; 3.2 Circumstantial knowledge of animal pathological anatomy; 3.3 Techniques of making histopathological sections; 3.4 Use and maintenance methods of microscope. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Communication skills; 4.2 Teamwork skills; 4.3 Practical operation skills; 4.4 Report writing skills; 4.5 Entrepreneurial skills.
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Pathological anatomical diagnosis is made, the causes of animal morbidity and death are explained, and prevention and control suggestions are put forward in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Standardized operation of identifying animal diseases by observing typical lesions; 2. Safe use of instruments and medicines; 3. Self-protection measures of autopsy personnel; 4. Disposal of instruments and supplies after autopsy; 5. Treatment of organs, tissues and sites after autopsy;

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	NECROPSY	DUTY NO.	605
TASK TITLE	ISSUE NECROPSY REPORT OF LIVESTOCK AND POULTRY CARCASSES	TASK NO.	6054
PERFORMANCE CRITERIA	The person performing this task must be able to issue necropsy reports of livestock and poultry carcasses according to necropsy records and pathological anatomy diagnosis results.		
RANGE STATEMENT	<p>The task can be performed in the office under the guidance of a senior Livestock Veterinary Technician.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Record books; 2. Pens; 3. Computers; 4. Camera; 5. Standard form of autopsy record; 6. Printer. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Select appropriate tools and equipment; 2. Overview necropsy; 3. Describe the necropsy findings; 4. Carry out pathological anatomy diagnosis; 5. Get the conclusion of necropsy; 6. Issue a necropsy report. 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Identify lesions; 1.2 Analyze lesions; 1.3 Give comprehensive observation and analysis; 1.4 Write necropsy report. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Understanding and analysis of lesions; 2.2 Pathological diagnosis. 	

	<p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Typical lesions of various animal epidemic diseases;</p> <p>3.2 Related theories of pathological anatomy;</p> <p>3.3 Requirements for writing necropsy reports of animal carcasses.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Teamwork skills;</p> <p>4.3 Report writing skills;</p> <p>4.4 Comprehensive analysis skills;</p> <p>4.5 Problem-solving skills;</p> <p>4.6 Entrepreneurial skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Pathological anatomical diagnosis is made, the causes of animal morbidity and death are explained, and prevention and control suggestions are put forward in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Knowledge of writing necropsy report; 2. Methodology of comprehensive analysis of problems.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT	DUTY NO.	606
TASK TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT OF COW	TASK NO.	6061
PERFORMANCE CRITERIA	The person performing this task must be able to carry out post-slaughter quarantine and treatment of cattle according to the technical requirements of post-slaughter quarantine and treatment of cattle.		
RANGE STATEMENT	<p>This task must be performed by the official veterinarian in the slaughter house during the slaughter of cattle.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Quarantine knives (2); 2. Sharp knife for bone removal; 3. Quarantine hook; 4. Rasp rod; 5. Disinfectant; 6. Personal protective equipment. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Choose appropriate equipment and drugs; 2. Number uniformly; 3. Check the head and hoof; 4. Check viscera; 5. Check carcass; 6. Perform re-examination; 7. Process the results; 8. Disinfection; 9. Do harmless treatment; 10. Take proper personal protection; 11. Record quarantine. 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Carry out sensory examination (visual examination, necropsy, touch examination and olfactory examination); 1.2 Issue the Animal Quarantine Certificate for those passing the quarantine inspection; 1.3 Issue the Notice of Animal Quarantine Treatment for those failing to pass the quarantine inspection; 1.4 Disinfection; 1.5 Harmless treatment. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p>	

	<p>2.1 Purpose and significance of cattle quarantine after slaughter;</p> <p>2.2 Procedures and methods of post-slaughter quarantine of cattle;</p> <p>2.2 Treatment of quarantine results of cattle after slaughter.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Relevant regulations on animal epidemic prevention;</p> <p>3.2 Requirements for post-slaughter quarantine of animals;</p> <p>3.3 Pathological changes of prescribed diseases in cattle;</p> <p>3.4 Commonly-used disinfecting methods;</p> <p>3.5 Use method of the protective mask.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Teamwork skills;</p> <p>4.3 Practical operation skills;</p> <p>4.4 Comprehensive analysis skills;</p> <p>4.5 Problem-solving skills;</p> <p>4.6 Entrepreneurial skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>The prescribed epidemic diseases of cattle are quarantined and the results are dealt with in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Quarantine regulations for cattle after slaughter; 2. Health and safety protection in the process of post-slaughter quarantine; 3. Biosafety knowledge.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT	DUTY NO.	606
TASK TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT OF SHEEP	TASK NO.	6062
PERFORMANCE CRITERIA	The person performing this task must be able to carry out post-slaughter quarantine and treatment of sheep according to the technical requirements of post-slaughter quarantine and treatment of sheep.		
RANGE STATEMENT	<p>This task must be performed by the official veterinarian in the slaughter house during the slaughter of sheep.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Quarantine knives (2); 2. Sharp knife for bone removal; 3. Quarantine hook; 4. Rasp rod; 5. Disinfectant; 6. Personal protective equipment. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Choose appropriate equipment and drugs; 2. Number uniformly; 3. Check the head and hoof; 4. Check viscera; 5. Check carcass; 6. Perform re-examination; 7. Process the results; 8. Disinfection; 9. Do harmless treatment; 10. Take proper personal protection; 11. Record quarantine. 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Carry out sensory examination (visual examination, necropsy, touch examination and olfactory examination); 1.2 Issue the Animal Quarantine Certificate for those passing the quarantine inspection; 1.3 Issue the Notice of Animal Quarantine Treatment for those failing to pass the quarantine inspection; 1.3 Disinfection; 1.4 Harmless treatment. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p>	

	<p>2.1 Purpose and significance of sheep quarantine after slaughter;</p> <p>2.2 Procedures and methods of post-slaughter quarantine of sheep;</p> <p>2.2 Treatment of quarantine results of sheep after slaughter.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Relevant regulations on animal epidemic prevention;</p> <p>3.2 Requirements for post-slaughter quarantine of animals;</p> <p>3.3 Pathological changes of prescribed diseases in sheep;</p> <p>3.4 Commonly-used disinfecting methods;</p> <p>3.5 Use method of the protective mask.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Teamwork skills;</p> <p>4.3 Practical operation skills;</p> <p>4.4 Comprehensive analysis skills;</p> <p>4.5 Problem-solving skills;</p> <p>4.6 Entrepreneurial skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>The prescribed epidemic diseases of sheep are quarantined and the results are dealt with in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Quarantine regulations for sheep after slaughter; 2. Health and safety protection in the process of post-slaughter quarantine; 3. Biosafety knowledge.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT	DUTY NO.	606
TASK TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT OF PIG	TASK NO.	6063
PERFORMANCE CRITERIA	The person performing this task must be able to carry out post-slaughter quarantine and treatment of pig according to the technical requirements of post-slaughter quarantine and treatment of pig.		
RANGE STATEMENT	<p>This task must be performed by the official veterinarian in the slaughter house during the slaughter of pig.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Quarantine knives (2); 2. Sharp knife for bone removal; 3. Quarantine hook; 4. Rasp rod; 5. Disinfectant; 6. Personal protective equipment. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Choose appropriate equipment and drugs; 2. Number uniformly; 3. Check African swine fever quickly; 4. Check the head, hoof and body; 5. Check the internal organs; 6. Check the carcass; 7. Check <i>Trichinella spiralis</i>; 8. Perform re-examination; 9. Process the results; 10. Disinfect; 11. Do harmless treatment; 12. Take proper personal protection; 13. Record quarantine. 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Carry out sensory examination (visual examination, necropsy, touch examination and olfactory examination); 1.2 Undertake microscopic examination; 1.3 Issue the Animal Quarantine Certificate for those passing the quarantine inspection; 1.4 Issue the Notice of Animal Quarantine Treatment for those failing to pass the quarantine inspection; 1.5 Disinfection; 1.6 Harmless treatment. <p>2.0 Principle</p> <p>The person performing this task must be able to</p>	

	<p>explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Purpose and significance of pig quarantine after slaughter; 2.2 Procedures and methods of post-slaughter quarantine of pig; 2.2 Treatment of quarantine results of pig after slaughter. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following:</p> <ol style="list-style-type: none"> 3.1 Relevant regulations on animal epidemic prevention; 3.2 Requirements for post-slaughter quarantine of animals; 3.3 Pathological changes of prescribed diseases in pig; 3.4 Commonly-used disinfecting methods; 3.5 Use method of the protective mask. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Communication skills; 4.2 Teamwork skills; 4.3 Practical operation skills; 4.4 Comprehensive analysis skills; 4.5 Problem-solving skills; 4.6 Entrepreneurial skills.
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>The prescribed epidemic diseases of pig are quarantined and the results are dealt with in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Quarantine regulations for pig after slaughter; 2. Examination of <i>Trichinella spiralis</i> in pigs; 3. Health and safety protection in the process of post-slaughter quarantine; 4. Biosafety knowledge.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT	DUTY NO.	606
TASK TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT OF POULTRY	TASK NO.	6064
PERFORMANCE CRITERIA	The person performing this task must be able to carry out post-slaughter quarantine and treatment of poultry according to the technical requirements of post-slaughter quarantine and treatment of poultry.		
RANGE STATEMENT	<p>This task must be performed by the official veterinarian in the slaughter house during the slaughter of poultry.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Quarantine knives (2); 2. Sharp knife for bone removal; 3. Quarantine hook; 4. Rasp rod; 5. Disinfectant; 6. Personal protective equipment. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Choose appropriate equipment and drugs; 2. Check carcass; 3. Make sampling inspection; 4. Perform re-examination; 5. Process the results; 6. Disinfect; 7. Do harmless treatment; 8. Take proper personal protection; 9. Record quarantine. 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Carry out sensory examination (visual examination, necropsy, touch examination and olfactory examination); 1.2 Issue the Animal Quarantine Certificate for those passing the quarantine inspection; 1.3 Issue the Notice of Animal Quarantine Treatment for those failing to pass the quarantine inspection; 1.4 Disinfection; 1.5 Harmless treatment. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Purpose and significance of poultry quarantine after 		

	<p>slaughter;</p> <p>2.2 Procedures and methods of post-slaughter quarantine of poultry;</p> <p>2.2 Treatment of quarantine results of poultry after slaughter.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Relevant regulations on animal epidemic prevention;</p> <p>3.2 Requirements for post-slaughter quarantine of animals;</p> <p>3.3 Pathological changes of prescribed diseases in poultry;</p> <p>3.4 Commonly-used disinfecting methods;</p> <p>3.5 Use method of the protective mask.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Teamwork skills;</p> <p>4.3 Practical operation skills;</p> <p>4.4 Comprehensive analysis skills;</p> <p>4.5 Problem-solving skills;</p> <p>4.6 Entrepreneurial skills.</p>
DESCRIPTION OF THE END PRODUCT / SERVICE	The prescribed epidemic diseases of poultry are quarantined and the results are dealt with in accordance with technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Quarantine regulations for poultry after slaughter; 2. Health and safety protection in the process of post-slaughter quarantine; 3. Biosafety knowledge.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT	DUTY NO.	606
TASK TITLE	POST-SLAUGHTER QUARANTINE AND TREATMENT OF RABBIT	TASK NO.	6065
PERFORMANCE CRITERIA	The person performing this task must be able to carry out post-slaughter quarantine and treatment of rabbits according to the technical requirements of post-slaughter quarantine and treatment of rabbits.		
RANGE STATEMENT	<p>This task must be performed by the official veterinarian in the slaughter house during the slaughter of rabbit.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Quarantine knives (2); 2. Sharp knife for bone removal; 3. Quarantine hook; 4. Rasp rod; 5. Disinfectant; 6. Personal protective equipment. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Choose appropriate equipment and drugs; 2. Make sampling inspection; 3. Check the internal organs; 4. Take re-examination; 5. Process the results; 6. Disinfect; 7. Do harmless treatment; 8. Take proper personal protection; 9. Record quarantine. 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Carry out sensory examination (visual examination, necropsy, touch examination and olfactory examination); 1.2 Issue the Animal Quarantine Certificate for those passing the quarantine inspection; 1.3 Issue the Notice of Animal Quarantine Treatment for those failing to pass the quarantine inspection; 1.4 Disinfect; 1.5 Do harmless treatment. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p>	

	<p>2.1 Purpose and significance of rabbit quarantine after slaughter;</p> <p>2.2 Procedures and methods of post-slaughter quarantine of rabbit;</p> <p>2.2 Treatment of quarantine results of rabbit after slaughter.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Relevant regulations on animal epidemic prevention;</p> <p>3.2 Requirements for post-slaughter quarantine of animals;</p> <p>3.3 Pathological changes of prescribed diseases in rabbit;</p> <p>3.4 Commonly-used disinfecting methods;</p> <p>3.5 Use method of the protective mask.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Teamwork skills;</p> <p>4.3 Practical operation skills;</p> <p>4.4 Comprehensive analysis skills;</p> <p>4.5 Problem-solving skills;</p> <p>4.6 Entrepreneurial skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>The prescribed epidemic diseases of rabbit are quarantined and the results are dealt with in accordance with technical requirements.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Quarantine regulations for rabbit after slaughter; 2. Health and safety protection in the process of post-slaughter quarantine; 3. Biosafety knowledge.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	FEEDING AND MANAGEMENT	DUTY NO.	607
TASK TITLE	MANAGEMENT OF DELIVERY ROOM	TASK NO.	6071
PERFORMANCE CRITERIA	The person performing this task must be able to manage the delivery room in accordance with technical requirements and the key points of standardized management of the delivery room.		
RANGE STATEMENT	<p>The task can be performed in the delivery room under the supervision of a senior Livestock Veterinary Technician or a Midwife.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Water basin; 2. Bucket; 3. Gauze; 4. Ligation rope; 5. Lighting equipment; 6. Soap; 7. Thermometer; 8. Cotton; 9. Tooth cutting and tail cutting tools (tooth cutting forceps and tail cutting forceps); 10. Disinfection drugs (alcohol, 2-5% iodine, 0.1% bromogeramine); 11. Delivery drugs (oxytocin, cardiogenic agent, antibiotic, glucose saline, etc.); 12. Young animals' incubator. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate prenatal articles and tools; 3. Assist delivery stably, accurately, lightly and quickly according to the requirements of delivery; 4. Carry out drug midwifery first in case of death and artificial midwifery if drug midwifery is ineffective. 5. Carry out umbilical cord cutting treatment on the produced piglets; 6. Assist primiparous piglets to eat colostrum; 	<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Prepare implementation plans for delivery room preparation, delivery goods preparation, delivery process, dystocia treatment, and nursing of newborn animals. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Implementation principle of normal delivery; 2.2 Implementation principle of dystocia. 		

<p>7. Observe the situation of newborn animals at any time;</p> <p>8. Clean the tools, equipment and delivery room;</p> <p>9. Store tools and equipment safely.</p>	<p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Reason for dystocia;</p> <p>3.2 Management plan of delivery room and its implementation method;</p> <p>3.3 Basis for receiving delivery and treatment of emergency;</p> <p>3.4 Determine the specific process of delivery.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Practical coping skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>The delivery room is managed in accordance with technical requirements and the key points of standardized management of the delivery room.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Safe operation methods of equipment and instruments; 2. Key points of safe use of various drugs; 3. Occupational health and safety; 4. Operation strategy and steps of midwifery; 5. Disposal method of excrement and waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	FEEDING AND MANAGEMENT	DUTY NO.	607
TASK TITLE	FEEDING AND MANAGEMENT OF SUCKLING YOUNG ANIMALS	TASK NO.	6072
PERFORMANCE CRITERIA	The person performing this task must be able to carry out professional feeding management in accordance with technical requirements and the characteristics of suckling young animals.		
RANGE STATEMENT	<p>The task can be performed in the nursery house under the supervision of a senior Livestock Veterinary Technician or an Zootechnician.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Nursing bed; 2. Crib; 3. Water dispenser; 4. Heating equipment (infrared lamp, resistance wire heater, gas heater, electric heating pad); 5. Lighting equipment; 6. Temperature controller; 7. Thermometer; 8. Dung removal equipment; 9. Disinfection drugs (alcohol, 2-5% iodine, 0.1% bromogermanine); 10. Immunization supplies (vaccines, syringes); 11. Nutritional supplements (iron and selenium supplements, glucose, sodium bicarbonate, Vitamin C); 12. Young animals incubator. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate instruments; 3. Help young animals develop the habit of fixing nipples and eating colostrum; 4. Regulate the ambient temperature and pay attention to cold and warmth; 5. Pay attention to prevention to prevent young animals from being trampled; 6. Vaccinate young animals according to immunization procedures; 7. Supplement nutrition according to the growth and development characteristics 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Prepare the nursery; 1.2 Prepare feeding items; 1.3 Develop the habit of fixing nipples; 1.4 Adjust and control the temperature in the house; 1.5 Pay attention to immunization program; 1.6 Use nutritional supplements; 1.7 Respond to emergencies. 	

<p>of young animals;</p> <ol style="list-style-type: none"> 8. Clean the nursery; 9. Store equipment safely. 	<p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Principles to be followed in feeding and management of suckling young animals. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <ol style="list-style-type: none"> 3.1 Implementation process of helping young animals form the habit of fixing nipples and eating colostrum; 3.2 Temperature control method in house; 3.3 Execution basis of immunization program; 3.4 Use of nutritional supplements. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Communication skills; 4.2 Practical coping skills; 4.3 Teamwork skills; 4.4 Report writing skills.
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Specialized feeding and management are conducted in accordance with technical requirements and the characteristics of lactating young animals.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Safe operation key points of equipment and instruments; 2. Rules of safe use of various drugs; 3. Occupational health and safety; 4. Operation strategy and steps of feeding; 5. Disposal method of excrement and waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	FEEDING AND MANAGEMENT	DUTY NO.	607
TASK TITLE	FEEDING AND MANAGEMENT OF FATTENING PIGS	TASK NO.	6073
PERFORMANCE CRITERIA	The person performing this task must be able to carry out professional feeding management in accordance with technical requirements and the characteristics of fattening pig.		
RANGE STATEMENT	<p>The task can be performed in fattening pig houses under the supervision of livestock veterinary technicians or zootechnicians.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Fattening column; 2. Crib; 3. Water dispenser; 4. Heating equipment (hot water heating, warm air heating, flue heating); 5. Lighting equipment; 6. Environmental control equipment (ventilation equipment, humidity controller, sprayer); 7. Thermometer; 8. Dung removal equipment; 9. Disinfection drugs (alcohol, 2-5% iodine, 0.1% bromogeramine); 10. Immunization supplies (vaccines, syringes); 11. Insect repellent products (ivermectin, levamisole hydrochloride, etc.); 12. Nutritional supplements. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate instruments; 3. Make preparations before the group transfer; 4. Group scientifically according to the differences when entering the group; 5. Feed scientifically; 6. Regulate the temperature and humidity 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Prepare the fattening house; 1.2 Prepare feeding items; 1.3 Judge the grouping basis; 1.4 Regulate and control the environment in the house; 1.5 Pay attention to deworming and immunization procedures; 	

<p>in the house;</p> <p>7. Clean the equipment in time and clean up the hygiene of the barn;</p> <p>8. Carry out immunization according to the procedure;</p> <p>9. Store tools and equipment safely.</p>	<p>1.6 Use nutritional supplements;</p> <p>1.7 Respond to emergencies.</p> <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <p>2.1 Nutritional principles followed in the process of feeding fattening pigs;</p> <p>2.2 Characteristics of fattening pigs at different growth stages;</p> <p>2.3 Principle of reasonable grouping.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Characteristics of fattening pigs at different growth stages;</p> <p>3.2 Feed formula for fattening pigs at different growth stages;</p> <p>3.3 Use characteristics of nutritional supplements in different stages.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Practical coping skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Specialized feeding and management are conducted in accordance with technical requirements and the characteristics of fattening pig.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Commonly used equipment and instruments; 2. Commonly used drugs; 3. Occupational health standard; 4. Feeding operating strategies; 5. Disposal of excrement and waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	FEEDING AND MANAGEMENT	DUTY NO.	607
TASK TITLE	FEEDING AND MANAGEMENT OF LAYING HENS	TASK NO.	6074
PERFORMANCE CRITERIA	The person performing this task must be able to carry out professional feeding management in accordance with technical requirements and the characteristics of laying hen.		
RANGE STATEMENT	<p>The task can be performed in the henhouse under the supervision of a senior Livestock Veterinary Technician or an Zootechnician.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Laying hen coop; 2. Automatic feeder; 3. Automatic water dispenser; 4. Automatic manure cleaner; 5. Lighting equipment; 6. Automatic temperature control and ventilation equipment; 7. Illumination facilities; 8. Automatic egg collection equipment; 9. Disinfection drugs (alcohol, 2-5% iodine, 0.1% bromogeramine); 10. Immunization supplies (vaccines, syringes); 11. Insect repellent products (albendazole ivermectin, Lechang, etc.); 12. Nutritional supplements. 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate items and tools; 3. Handle the brooding period; 4. Do a good job in group transfer and eliminate sick and disabled chickens in time; 5. Do a good job in prenatal management; 6. Supplement light during the laying period; 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Prepare the henhouse; 1.2 Prepare feeding items; 1.3 Prepare illumination procedures; 1.4 Regulate and control the environment in the house; 1.5 Pay attention to deworming and immunization procedures; 1.6 Use nutritional supplements; 	

<p>7. Regulate the temperature and humidity in the house properly;</p> <p>8. Clean tools and equipment in time, clean the barn and keep it clean and dry;</p> <p>9. Carry out deworming and immunization according to procedures;</p> <p>10. Store tools and equipment safely.</p>	<p>1.7 Respond to emergencies.</p> <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <p>2.1 Nutritional principles followed in the process of feeding laying hen;</p> <p>2.2 Principle of reasonable grouping;</p> <p>2.3 Characteristics of laying hens in different growth stages.</p> <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <p>3.1 Feed formula for laying hen at different growth stages;</p> <p>3.2 Use characteristics of nutritional supplements in different stages.</p> <p>4.0 Essential Skills</p> <p>4.1 Communication skills;</p> <p>4.2 Practical coping skills;</p> <p>4.3 Teamwork skills;</p> <p>4.4 Report writing skills.</p>
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Specialized feeding and management are conducted in accordance with technical requirements and the characteristics of laying hen.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Commonly used equipment and instruments; 2. Commonly used drugs; 3. Occupational health standard; 4. Feeding operating strategies; 5. Disposal of excrement and waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	FEEDING AND MANAGEMENT	DUTY NO.	607
TASK TITLE	FEEDING AND MANAGEMENT OF DAIRY COWS	TASK NO.	6075
PERFORMANCE CRITERIA	The person performing this task must be able to carry out professional feeding management in accordance with technical requirements and the characteristics of dairy cows at different stages.		
RANGE STATEMENT	<p>The task can be performed in cattle farms under the supervision of middle and senior Livestock Veterinary Technicians or Zootechnician.</p> <p>The tools and equipment to be used include:</p> <ol style="list-style-type: none"> 1. Neck yoke; 2. Bed for lying; 3. Feeding grains; 4. Drinking water equipment; 5. Environmental control equipment; 6. Sports fields; 7. Mating equipment (semen treatment equipment, estrus identification equipment, pregnancy examination equipment, obstetric examination equipment, midwifery equipment, obstetric treatment equipment); 8. Washing equipment; 9. Dung cleaning equipment; 10. Milking equipment; 11. Disinfection drugs (alcohol, 2-5% iodine, 0.1% bromogeramine); 12. Deworming and immunization supplies (deworming drugs, vaccines, syringes). 		
EVIDENCE REQUIREMENT			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
<p>The person performing this task must be able to do the following:</p> <ol style="list-style-type: none"> 1. Observe the health and safety prevention measures; 2. Choose appropriate items and tools; 3. Prepare feed according to the feeding standard of dairy cows; 4. Divide dairy cows into groups; 5. Do well the work of preventing heat and lowering temperature, preventing cold 		<p>Detailed knowledge about:</p> <p>1.0 Methods</p> <p>The person performing this task must be able to explain how to:</p> <ol style="list-style-type: none"> 1.1 Prepare farm facilities used in the farm; 1.2 Prepare feeding items; 1.3 Standardize milking procedures; 1.4 Regulate and control the environment in the field; 	

<p>and keeping warm;</p> <ol style="list-style-type: none"> 6. Ensure daily exercise; 7. Follow the milking standard procedures strictly; 8. Clean tools and equipment in time, clean the barn and keep it clean and dry; 9. Carry out deworming and immunization according to procedures; 10. Store tools and equipment safely. 	<ol style="list-style-type: none"> 1.5 Pay attention to deworming and immunization procedures; 1.6 Respond to emergencies. <p>2.0 Principle</p> <p>The person performing this task must be able to explain the following principles:</p> <ol style="list-style-type: none"> 2.1 Nutritional principles followed in the process of feeding dairy cows; 2.2 Principle of reasonable grouping. <p>3.0 Theories</p> <p>The person performing this task must be able to explain the following contents:</p> <ol style="list-style-type: none"> 3.1 Characteristics of dairy cows at different growth stages; 3.2 Feed formula for dairy cows at different growth stages; 3.3 Use characteristics of nutritional supplements in different stages. <p>4.0 Essential Skills</p> <ol style="list-style-type: none"> 4.1 Communication skills; 4.2 Practical coping skills; 4.3 Teamwork skills; 4.4 Report writing skills.
<p>DESCRIPTION OF THE END PRODUCT / SERVICE</p>	<p>Specialized feeding and management are conducted in accordance with technical requirements and the characteristics of dairy cows.</p>
<p>CIRCUMSTANTIAL KNOWLEDGE</p>	<p>Detailed knowledge about:</p> <ol style="list-style-type: none"> 1. Commonly used equipment and instruments; 2. Commonly used drugs; 3. Occupational health standard; 4. Feeding operating strategies; 5. Disposal of excrement and waste.

TABLE 1: LIVESTOCK VETERINARY TECHNICIAN DACUM TABLE -NTA 6

DUTIES	TASKS	ENABLERS
<p>1.0 Monitor of immunization effect</p>	<p>1.1 Treatment of adverse immunization reaction.</p> <p>1.2 Evaluation of immunization potency.</p> <p>1.3 Preparation of immunization programme.</p>	<p>General skills and knowledge</p> <ul style="list-style-type: none"> • Identification of different types of adverse immunization reactions • Measurement of animal body temperature • Identification of animal breathing and heart sounds • Weigh and calculation of the dosage of drugs • Intramuscular injection • Subcutaneous injection • Venipuncture procedure • Selection and application of drugs • Blood collection from poultry wing veins • Blood collection from porcine anterior vena cava • Blood collection from jugular vein of cattle and sheep • Blood collection from oxtail jugular vein • Serum isolation and preservation • Serum agglutination test • Operation of the haemagglutination-hemagglutination inhibition test • Operation of enzyme-linked immunosorbent assay • Animal care • Clean of disinfection tools, equipment and workplaces • Knowledge of animal immunization • Knowledge of animal pharmacology • Knowledge of biosafety • Medical waste disposal methods <p>Tools and equipment</p> <ul style="list-style-type: none"> • Veterinary thermometer • Stethoscope • Disposable syringe

DUTIES	TASKS	ENABLERS
		<ul style="list-style-type: none"> • Mask • Disposable latex gloves • Protective clothing • Platform scales or weighing scales • Veterinary blood collectors • Electrothermostat • Benchtop low-speed centrifuge • Pipette • 96-well plate • ELIASA • Tray balance • Oscillator • Mask and disposable latex glove • Protective clothing • Refrigerator <p>Materials</p> <ul style="list-style-type: none"> • Standard antigenic substances • Standard positive sera • Standard positive sera • Anticoagulants • Antibody detect kit • Deionized water <p>Requirements for employees</p> <ul style="list-style-type: none"> • Teamwork • Scientific spirit • Carefulness and preciseness • Time management

DUTIES	TASKS	ENABLERS
2.0 Collection and delivery of pathological tissue samples	2.1 Collection and preservation of pathological tissue samples. 2.2 Collection and preservation of pathogen analysis samples. 2.3 Transport of samples.	<p>General skills and knowledge</p> <ul style="list-style-type: none"> • Select suitable pathological samples for different diseases • Pathological anatomy of poultry • Pathological anatomy of pigs • Pathological anatomy of ruminants • Preparation of fixation fluid for pathological samples. • Clean of disinfection tools, equipment and workplaces • Preparation of liquid • Collection of animal blood • Serum separation • Use of autoclave • Disinfection and clean of anatomical instruments <p>Tools and equipment</p> <ul style="list-style-type: none"> • Sterilized scalpel • Sterilized surgical scissors • Sterilized tweezers • Sterilized glass bottle, capped centrifuge tube, plate • Autoclave • Refrigerator, freezer • Alcohol lamp • Syringe • Mask and disposable latex glove • Protective clothing • Protective mask <p>Materials</p> <ul style="list-style-type: none"> • Anticoagulants • Phosphate buffer • Hank's solution • Formalin solution <p>Requirements for employees</p> <ul style="list-style-type: none"> • Teamwork • Scientific spirit • Carefulness and preciseness • Time management

DUTIES	TASKS	ENABLERS
3.0 Parasite examination	3.1 Examination of worm eggs, larvae and coccidia oocysts in feces. 3.2 Examination of parasites in scraped objects of skin. 3.3 Examination of parasite in organs and tissues. 3.4 Examination of protozoon and worm's larvae in blood.	<p>General skills and knowledge</p> <ul style="list-style-type: none"> • Collection of appropriate case samples for different diseases • Operating procedure of parasite detection • Skills and knowledge in laboratory examination of parasites • Identification of parasite map • Use of microscope, centrifuge, incubator and other instruments and equipment • Animal Parasitology <p>Tools and equipment</p> <ul style="list-style-type: none"> • Saline • Saturated brine • Anticoagulants • 10%NaOH • Cedar oil • Disinfectant <p>Materials</p> <ul style="list-style-type: none"> • Disposable latex gloves, masks, hats, experimental clothes and other personal protective equipment • Microscope, centrifuge, constant temperature incubator, pipette balance, etc. • Blood collector, blade, beaker, pipette tip, glass slide, centrifuge tube and other consumables <p>Requirements for employees</p> <ul style="list-style-type: none"> • Teamwork • Scientific spirit • Carefulness and preciseness • Time management

DUTIES	TASKS	ENABLERS
4.0 Clinical validation	4.1 Blood routine examination. 4.2 Feces routine examination. 4.3 Urine routine examination. 4.4 Biochemical examination.	<p>General skills and knowledge</p> <ul style="list-style-type: none"> • Collection of appropriate pathological material samples for different diseases • Operating procedure of blood routine, urine and fecal clinical examination • Skills and knowledge of blood routine, urine, feces and biochemical examination • Interpretation of indicator of blood routine, urine, feces and biochemical examination • Use of microscope, hematology analyzer, biochemical analyzer and other instruments and equipment • Zoonomy • Animal clinical diagnostics <p>Tools and equipment</p> <ul style="list-style-type: none"> • Personal protective equipment such as gloves, hats and experimental clothes • Microscope, hematology analyzer, biochemical analyzer, urine analyzer, centrifuge, pipette and other equipment • Glass slide, centrifuge tube, glass rod, pipette tip and other consumables <p>Materials</p> <ul style="list-style-type: none"> • Alcohol • Saline • Anticoagulants • Preservative • Wright Stain • Giemsa stain • Benzidine • Disinfectant <p>Requirements for employees</p> <ul style="list-style-type: none"> • Teamwork • Scientific spirit • Carefulness and preciseness • Time management

DUTIES	TASKS	ENABLERS
5.0 Necropsy	5.1 Standard anatomy of livestock and poultry carcasses. 5.2 Identification of livestock and poultry organ lesions. 5.3 Identification of animal epidemic diseases by observing typical lesions. 5.4 Issue necropsy report of livestock and poultry carcasses.	<p>General skills and knowledge</p> <ul style="list-style-type: none"> • Communication skills • Knowledge of livestock and poultry anatomy • Zoophysiology • Biosafety protection • Skills and knowledge of collection, packaging and inspection of pathological material • Medical history investigation skills • Skills of observation, description and recording of lesions • Changes of animal carcasses after death • Skills of making pathological tissue sections • Lesion identification and analysis skills • Skill of treating corpse in a harmless way • Disinfection methods and skills • Preparation and use of medicament <p>Tools and equipment</p> <ul style="list-style-type: none"> • Work clothes, aprons, rubber gloves, rubber shoes, safety helmets, masks, goggles and other personal protective equipment • Knives, scissors, tweezers, bone saws, axes, sharpening sticks, grindstones and other necropsy tools • Slicing machine • Microscope • Refrigerator • Camera • Computer • Printers <p>Materials</p> <ul style="list-style-type: none"> • Carcass of disease livestock and poultry • Pathological sections such as fixation fluid, dehydration agent, transparency agent and staining solution • Disinfectant <p>Requirements for employees</p>

DUTIES	TASKS	ENABLERS
6.0 Post-slaughter quarantine and treatment	6.1 Post-slaughter quarantine and treatment of cow. 6.2 Post-slaughter quarantine and treatment of sheep. 6.3 Post-slaughter quarantine and treatment of pig. 6.4 Post-slaughter quarantine and treatment of poultry. 6.5 Post-slaughter quarantine and treatment of rabbit.	<p>General skills and knowledge</p> <ul style="list-style-type: none"> • Communication skills • Knowledge of livestock and poultry anatomy • Zoophysiology • Administrative regulations on animal husbandry and veterinary medicine • Identification skills of characteristic lesions of animal infectious diseases and parasitic diseases • Animal epidemic prevention and quarantine • Biosafety protection • Disinfection methods and skills • Selection of lymph nodes and observation skills of common lesions • Post-mortem inspection procedures and checkpoint setting • Identification and management skills of common pathological changes • Examination skills of head, hoof and skin • Visceral examination skills • Carcass inspection skills • Skill of treating disease corpse in a harmless way <p>Tools and equipment</p> <ul style="list-style-type: none"> • Work clothes, aprons, rubber gloves, rubber shoes, safety helmets, masks, goggles and other personal protective equipment • Quarantine knives, sharp knife for bone removal, quarantine hooks, sharpening sticks and other quarantine tools • Microscope • Elbow scissors • Glass slide • Tissue triturator • Copper screen, nylon screen • Magnetic heating stirrer • Separating funnel, conical flask, beaker <p>Materials</p>

DUTIES	TASKS	ENABLERS
7.0 Feeding and management	7.1 Management of delivery room. 7.2 Feeding and management of suckling young animals. 7.3 Feeding and management of fattening pigs. 7.4 Feeding and management of laying hens. 7.5 Feeding and management of dairy cows.	<p>General skills and knowledge</p> <ul style="list-style-type: none"> • Correct delivery • Deal with emergencies such as dystocia • Nursing care of newborn piglets • Vaccination of young animals • Nutritional supplement for young animals • Transfer group correctly • Scientific feeding • House environment control • Execution of illumination program correctly • Preparation of complete feed • Guarantee of daily exercise time • Heatstroke prevention, cold protection and warmth • Standardized milking • Cleaning tools and barn hygiene <p>Tools and equipment</p> <ul style="list-style-type: none"> • Buckets, basins, gauze, scissors, cotton balls, scalpels and other delivery supplies • Lighting equipment • Heating equipment • Tooth cutting and tail cutting tools • Nursing bed • Complete set of feeding equipment • Environmental control equipment • Young animals incubator • Automatic egg collection equipment • Mating equipment • Milking equipment • Cleaning and dung removal equipment • Immunization supplies <p>Materials</p> <ul style="list-style-type: none"> • Disinfection drug • Delivery drugs • Vaccine • Deworming drugs • Nutritional supplement <p>Requirements for employees</p>

