THE NATIONAL COUNCIL FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

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OCCUPATIONAL STANDARDS

OCCUPATION: LIVESTOCK VETERINARY TECHNICIAN

LEVEL: NTA LEVEL 4

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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. NTRODUCTION

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, with a high level of human development. 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 (NACTVET) has begun the job of drafting Occupational Standards (OS) that will eventually be adopted as National Occupational Standards (NOS) for use in the delivery of TET that meets the needs of the labour market and the country's economic agenda.

Occupational Standards (OS) are performance criteria that are matched with labour market demands. Each of them describes the functions, performance standards, and understanding or knowledge underpinning a given occupation. They combine skills, knowledge, and attitudes to describe best practice. They are useful tools for establishing job roles, personnel recruitment, supervision, and appraisal, as well as TET Standards. They are also helpful for benchmarking and harmonizing job 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 application across all public and private institutions.

However, it must be noted that Occupational Standards are different from Training /Education Standards. Occupational standards are defined in terms of activities performed by a person in a selected occupation (e.g., an electrical engineer designs electrical circuits, performs troubleshooting in electrical circuits, etc.), and are usually defined by Employers following procedures as agreed upon by all the stakeholders. On the other hand, Training and Education Standards are developed from the activities defined in the occupational standards, and they specify learning objectives to ensure that the necessary skills and knowledge are developed by a person to enable him/her to function at an agreed level in an occupation. Training and Education Standards are used to define curricula in training institutions. It is critical, however, to establish a direct link between the occupational standards and the training standards for both of them to respond collaboratively to the demands of the labour market.

For the purpose of TET delivery, Tanzania has 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. Therefore, it is quite pertinent for TET institutions to use the relevant occupational standards as a benchmark for formulating their curricula.

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.

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 process of developing these Occupational Standards involved both local and international expertise. The process began with an examination of major documents that guide Tanzanian skills development including the *10-year National Skills Development Strategy (2016-2026).* 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 team of experts in consultation with practitioners developed draft occupational standards. The draft document was used to develop an occupational profile for each occupation (DACUM Chart), which is attached as an **Appendix** to every Occupational Standard.

The occupational standards were validated during the stakeholders' forum held on 22nd and 23rd February 2024 at Morogoro. The information from the stakeholders' forum provides insight from the workplace, professional bodies, regulatory bodies and sector ministries regarding trends and changes in the profession, including how well graduates are prepared for working in the occupation.

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) Restraining 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 operation and immunization effect monitoring

h) Collection and delivery of blood samples

i) Use of common instruments

j) Drug reagent storage, drug compatibility and drug delivery 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, 5 and 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 STANDARD

5.1. OCCUPATIONAL STANDARDS FOR LIVESTOCK VETERINARY TECHNICIAN FOR NTA LEVEL 4

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	PERFORM RESTRAINT OF ANIMALS	**DUTY NO.**	401
TASK TITLE	CONDUCT RESTRAINT OF PIGS	**TASK NO.**	4011
PERFORMANCE CRITERIA	The person performing this task must be able to perform pig restraint according to the operation procedures, relevant safety regulations and technical requirements of production enterprises, and in combination with the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or surgeon. The tools and equipment to be used include: 1. Muzzle rope/pig nose ring sleeve fixator; 2. Pig nose ring fixator; 3. Nose twisting rod; 4. Long-handled pig-catching forceps; 5. Turn-over operating table; 6. Stalls; 7. Pig snare; 8. Personal protective equipment, such as masks, doctor's clothes, gloves and water proof shoes.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Select appropriate tools and equipment; 2. Choose restraint mode; 3. Make the pigs stand; 4. Lift the pigs; 5. Make the pigs lie on their sides; 6. Lift the pigs on the hind legs; 7. Use the stalls; 8. Check the restraint effect; 9. Clean the tools, equipment and workplace; 10. Store tools and equipment safely; 11. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Make restraint plans for different types of pigs such as piglets, boars and big pigs; 1.2 Evaluate the restraint effect of pigs. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Standards for pig restraint; 2.2 Evaluation standards of pig restraint effect; 2.3 Process specification of pig restraint. **3.0 Theories** The person performing this task must be able to explain the following:

	3.1 Selection criteria of pig restraint mode. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Pig Restraint is performed in accordance with approved technical specifications and the actual situation of the animals.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomy; 2. Knowledge of animal clinical diagnosis and treatment; 3. Knowledge of animal behavior; 4. Occupational health and safety; 5. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	PERFORM RESTRAINT OF ANIMALS	**DUTY NO.**	401
TASK TITLE	CONDUCT FIXIATION OF HORSES	**TASK NO.**	4012
PERFORMANCE CRITERIA	The person performing this task must be able to perform horse Restraint according to the operation procedures, relevant safety regulations and technical requirements of production enterprises, and in combination with the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Nose twister; 2. Ear clip; 3. Mouth gag; 4. Column; 5. Chest leather; 6. Hip leather/flat rope; 7. Shoulder leather/belt; 8. Stalls; 9. Personal protective equipment, such as masks, doctor's clothes, gloves and water proof shoes.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Select appropriate tools and equipment; 2. Choose Restraint mode; 3. Tie the horse; 4. Fix horse head; 5. Fix horse limb hoof; 6. Fix the horse in lying position; 7. Use the stalls to fix horse; 8. Check the Restraint effect; 9. Clean the tools, equipment and workplace; 10. Store tools and equipment safely. 11. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Make Restraint plans for horses of different sizes such as foals and adult horses; 1.2 Evaluate the Restraint effect of horses. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Standards for horse Restraint; 2.2 Evaluation standard of horse Restraint effect; 2.3 Process specification of horse Restraint. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Selection criteria of horse Restraint mode

	4.0 Essential Skills 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Horse Restraint is performed in accordance with approved technical specifications and the actual situation of the animals.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomy; 2. Knowledge of animal clinical diagnosis and treatment; 3. Knowledge of animal behavior; 4. Occupational health and safety; 5. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	PERFORM RESTRAINT OF ANIMALS	**DUTY NO.**	401
TASK TITLE	CONDUCT RESTRAINT OF CATTLE	**TASK NO.**	4013
PERFORMANCE CRITERIA	The person performing this task must be able to perform restraint of cattle according to the operational procedures, relevant safety regulations and technical requirements of production enterprises, and in combination with the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Bull-holder; 2. Ropes; 3. Column; 4. Personal protective equipment, such as masks, doctor's clothes, gloves and water proof shoes.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Select appropriate tools and equipment; 2. Choose restraint mode; 3. Fix cattle head; 4. Fix the four legs; 5. Fix the cattle in lying position; 6. Use the stalls to fix cattle; 7. Check the restraint effect; 8. Clean the tools, equipment and workplace; 9. Store tools and equipment safely. 10. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Make restraint plans for cattle of different sizes such as calves and adult cattle; 1.2 Evaluate the restraint effect of cattle. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Standards for cattle restraint; 2.2 Evaluation standard of cattle restraint effect; 2.3 Process specification of cattle restraint. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Selection criteria of pig restraint mode. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Cattle restraint is performed in accordance with approved technical specifications and the actual situation of the animals.

CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomy; 2. Knowledge of animal clinical diagnosis and treatment; 3. Knowledge of animal behavior; 4. Occupational health and safety; 5. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	PERFORM RESTRAINT OF ANIMALS	**DUTY NO.**	401
TASK TITLE	CONDUCT RESTRAINT OF SHEEP	**TASK NO.**	4014
PERFORMANCE CRITERIA	The person performing this task must be able to perform sheep restraint according to the operation procedures, relevant safety regulations and technical requirements of production enterprises, and in combination with the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or surgeon. The tools and equipment to be used include: 1. Sheep chest strap; 2. Ropes; 3. Personal protective equipment, such as masks, doctor's clothes and gloves.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Select appropriate tools and equipment; 2. Choose restraint mode; 3. Fix the sheep in a standing position; 4. Fix the sheep in a lying position; 5. Check the restraint effect; 6. Clean the tools, equipment and workplace; 7. Store tools and equipment safely. 8. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the sheep in different examination parts such as head, limbs and hoofs, chest and abdomen, and make Restraint plan; 1.2 Evaluate the restraint effect of sheep. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Standards for sheep restraint; 2.2 Evaluation standard of sheep restraint effect; 2.3 Process specification of sheep restraint. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Selection criteria of sheep restraint mode. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Sheep restraint is performed in accordance with approved technical requirements and the actual situation of the animals.

CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomy; 2. Knowledge of animal clinical diagnosis and treatment; 3. Knowledge of animal behavior; 4. Occupational health and safety; 5. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	PERFORM RESTRAINT OF ANIMALS	**DUTY NO.**	401
TASK TITLE	CARRY OUT RESTRAINT OF DOGS AND CATS	**TASK NO.**	4015
PERFORMANCE CRITERIA	The person performing this task must be able to perform bare-hand, instrument- or drug-assisted restraint of dogs or cats according to the operation procedures, relevant safety regulations and technical requirements of production enterprises, and in combination with the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Mouth muzzle, protective ring/Elizabeth collar; 2. Restraint cage; 3. Restraint grid; 4. Dog/cat net; 5. Clamping dog/cat pliers; 6. Chemical Restraint supplies, such as syringes, tweezers and medicines; 7. Personal protective equipment, such as masks, doctor's clothes and gloves.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Select appropriate tools and equipment; 2. Choose Restraint mode; 3. Fix dogs and cats with bare hands; 4. Use oral cuffs to fix dogs and cats; 5. Use protective rings/Elizabeth collars to fix dogs and cats; 6. Use cage/frame to fix dog and cat; 7. Use Restraint nets to fix dogs and cats; 8. Use dog/cat nets to fix dogs and cats; 9. Use pliers to fix dogs and cats; 10. Use chemical drugs to fix dogs and cats; 11. Check the Restraint effect; 12. Clean the tools, equipment and the workplace;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Make Restraint plans for different small animals such as dogs and cats; 1.2 Evaluate the Restraint effect of dogs and cats. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Standards for dogs and cats Restraint; 2.2 Evaluation standard of dogs and cats Restraint effect; 2.3 Process specification of cats and dogs Restraint. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Selection criteria of different small animals' Restraint methods; 3.2 The way and scope of application of physical Restraint; 3.3 Drug types and applicable scope of chemical Restraint.

13. Store tools and equipment safely. 14. Observe health, occupational and environmental safety rules and regulations.	**4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Cat Restraint and dog Restraint are performed in accordance with approved technical specifications and the actual situation of the animals.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomy; 2. Knowledge of animal clinical diagnosis and treatment; 3. Knowledge of animal behavior; 4. Occupational health and safety; 5. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CONDUCT DISINFECTION	**DUTY NO.**	402
TASK TITLE	CARRY OUT SELECTION AND PREPARATION OF DISINFECTANTS	**TASK NO.**	4021
PERFORMANCE CRITERIA	The person performing this task must be able to select appropriate disinfectants according to the post operation procedures and the actual situation of disinfection objects, and prepare disinfectants safely and scientifically.		
RANGE STATEMENT	The task can be performed in farms or animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Disinfectant: ethanol, sodium hydroxide, potassium permanganate, iodine tincture, hydrated lime and lime milk; 2. Disinfection object: Such as venues, equipment, livestock and poultry; 3. Disinfectant preparation equipment: Such as scales and measuring cylinders; 4. Personal protective equipment, such as medical protective masks, helmets, goggles, rubber gloves and rubber boots.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Select appropriate tools and equipment; 2. Choose the appropriate disinfectant type; 3. Select the appropriate preparation method. 4. Prepare 75% alcohol solution; 5. Prepare 5% sodium hydroxide solution; 6. Prepare 0.1% potassium permanganate solution; 7. Prepare 2% iodine tincture solution; 8. Prepare hydrated lime; 9. Prepare 20% lime milk; 10. Clean the tools, equipment and the workplace; 11. Store tools and equipment safely. 12. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Choose the type of disinfectant according to different equipment, environment, housing and animals; 1.2 Select the tools needed for disinfectant preparation according to the requirements of liquid disinfectant quantity and solid disinfectant weighing; 1.3 Calculate the dosage of various disinfectants. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Disinfection principle of different types of disinfectants; 2.2 Types and selection of disinfectants. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Preparation methods of commonly-used disinfectants.

	4.0 Essential Skills 4.1 Waste disposal skills; 4.2 Safety protection skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Selection and preparation of disinfectants is performed in accordance with approved technical requirements and the actual situation of disinfection objects.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Animal pharmacological knowledge; 3. Basic knowledge of chemistry; 4. Chemical safety; 5. Chemical waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CONDUCT DISINFECTION	**DUTY NO.**	402
TASK TITLE	CARRY OUT DISINFECTION OF INSTRUMENTS	**TASK NO.**	4022
PERFORMANCE CRITERIA	The person performing this task must be able to disinfect instruments according to the actual situation of the disinfected equipment.		
RANGE STATEMENT	The task can be performed in farms, laboratoies or animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Disinfectant: ethanol, sodium hydroxide, potassium permanganate, iodine tincture, hydrated lime and lime milk etc.; 2. Disinfection facilities and equipment for medical equipment: soft brush, drying oven and pressure sterilization pot; 3. Disinfection facilities and equipment for feeding utensils and means of delivery: high-pressure water guns, scrubbing equipment, spray facilities, ultraviolet lamps, flame disinfection guns; 4. Personal protective equipment, such as medical protective masks, helmets, goggles, rubber gloves and rubber boots.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Choose the appropriate method of analysis. 2. Choose the appropriate equipment; 3. Disinfect medical equipment; 4. Disinfect feeding appliances; 5. Disinfect means of delivery; 6. Clean the tools, equipment and workplace; 7. Store tools and equipment safely; 8. Fill in the disinfection work record sheet. 9. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Make disinfection plans for medical equipment, feeding equipment and means of delivery; 1.2 Evaluate the disinfection effect of instruments. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Necessity principle of equipment disinfection; 2.2 Disinfection principle of different types of disinfectants; 2.3 Types and selection of disinfectants. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Selection criteria of disinfection methods for instruments. **4.0 Essential Skills** 4.1 Waste disposal skills;

	4.2 Safety protection skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Disinfection of instruments is carried out in accordance with approved technical specifications and the actual situation of the disinfected equipment.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Animal microbial knowledge; 3. Knowledge of animal immunization; 4. Chemical safety; 5. Biosafety; 6. Chemical waste disposal methods; 7. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CONDUCT DISINFECTION	**DUTY NO.**	402
TASK TITLE	CARRY OUT ENVIRONMENTAL DISINFECTION	**TASK NO.**	4023
PERFORMANCE CRITERIA	The person performing this task must be able to disinfect the environment according to the actual situation of the disinfected equipment.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Disinfectant: ethanol, sodium hydroxide, potassium permanganate, iodine tincture, hydrated lime and lime milk; 2. Disinfection facilities and equipment for medical equipment: soft brush, drying oven and pressure sterilization pot; 3. Disinfection facilities and equipment for feeding utensils and means of delivery: high-pressure water guns, scrubbing equipment, spray facilities, ultraviolet lamps, flame disinfection guns; 4. Personal protective equipment, such as medical protective masks, helmets, goggles, rubber gloves and rubber boots.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Choose the appropriate method of disinfection; 2. Choose the appropriate equipment; 3. Use ultraviolet irradiation, spraying, fumigation and other methods to disinfect the air; 4. Choose biological heat, incineration, chemicals and other methods to disinfect the feces and dirt in the livestock house; 5. Choose physical, chemical and biological methods to disinfect farm sewage; 6. Clean the tools, equipment and workplace; 7. Store tools and equipment safely. 8. Check the disinfection effect; 9. Fill in the disinfection work record sheet. 10. Observe health, occupational and environmental safety rules and	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Make disinfection plans for air, manure from livestock horses and sewage from farms; 1.2 Evaluate the disinfection effect of the environment. **2.0 Principle** The person performing this task must be able to explain the following: 2.1 Necessity principle of environmental disinfection; 2.2 Disinfection principle of different types of disinfectants; 2.3 Types and selection of disinfectants. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Selection criteria of environmental disinfection methods. **4.0 Essential Skills** 4.1 Waste disposal skills;

regulations.	4.2 Safety protection skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The environmental disinfection is accomplished in accordance with technical requirements and actual environmental conditions.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Animal microbial knowledge; 3. Knowledge of animal immunization; 4. Biosafety; 5. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CONDUCT DISINFECTION	**DUTY NO.**	402
TASK TITLE	CARRY OUT DISINFECTION OF BREEDING HORSES	**TASK NO.**	4024
PERFORMANCE CRITERIA	The person performing this task must be able to complete the disinfection of the breeding housing according to the actual situation of the housing.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Disinfectant: Such as sodium hydroxide, potassium permanganate, glutaraldehyde, hydrated lime, lime milk, etc.; 2. Disinfection facilities and equipment: high-pressure water guns, scrubbing equipment, spray facilities, ultraviolet lamps, flame disinfection guns; 3. Personal protective equipment, such as medical protective masks, helmets, goggles, rubber gloves and rubber boots.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Choose the appropriate method of analysis. 2. Choose the appropriate equipment; 3. Use physical, chemical and biological methods to carry out routine disinfection of housing; 4. Use physical, chemical and biological methods to carry out routine disinfection of contaminated housing; 5. Clean the tools, equipment and workplace; 6. Store tools and equipment safely. 7. Evaluate the effectiveness of disinfection; 8. Fill in the disinfection work record sheet. 9. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Develop disinfection plans for housings in different conditions, such as conventional housings, contaminated housings, etc.; 1.2 Evaluate the disinfection effect of housings. **2.0 Principle** The person performing this task must be able to explain the following: 2.1 Necessity principle of housing disinfection; 2.2 Disinfection principle of different types of disinfectants; 2.3 Types and selection of disinfectants. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Selection criteria of housing disinfection methods. **4.0 Essential Skills** 4.1 Equipment use and maintenance skills; 4.2 Safety protection skills;

	4.3 Solidarity and collaboration skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The disinfection of breeding horse is completed in accordance with approved technical specifications and actual conditions of housings.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Animal microbial knowledge; 3. Knowledge of animal immunization; 4. Biosafety; 5. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CONDUCT DISINFECTION	**DUTY NO.**	402
TASK TITLE	CARRY OUT DISINFECTION OF HOUSING WITH ANIMALS	**TASK NO.**	4025
PERFORMANCE CRITERIA	The person performing this task must be able to complete the disinfection of housing with animals in accordance with the operating procedures of the actual conditions of the housings..		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Disinfectant: such as peroxyacetic acid, decylammonium bromide solution, bromogeramine solution, sodium hypochlorite solution, glutaraldehyde solution, potassium peroxymonosulfate complex solution; 2. Disinfection facilities and equipment: such as spraying facilities, UV lamps, flame disinfection guns; 3. Personal protective equipment, such as medical protective masks, helmets, goggles, rubber gloves and water proof shoes.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Prepare tools for disinfection with animals; 3. Use disinfection tools for animals; 4. Determine the frequency of disinfection; 5. Clean the tools, equipment and workplace; 6. Store tools and equipment safely; 7. Evaluate the effectiveness of disinfection; 8. Fill in the disinfection work record sheet. 9. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Develop a disinfection plan for the environment with the animals; 1.2 Check the effects of disinfection with animals. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of the necessity of disinfection with animals; 2.2 Disinfection principle of different types of disinfectants; 2.3 Types and selection of disinfectants. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Criteria for the selection of disinfection methods with animals; 3.2 Criteria for determining the frequency of disinfection. **4.0 Essential Skills** 4.1 Equipment use and maintenance skills;

	4.2 Safety protection skills; 4.3 Solidarity and collaboration skills;
DESCRIPTION OF THE END PRODUCT / SERVICE	The disinfection of the housings with animals is completed in accordance with approved technical specifications and actual situations of housings with animals.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Animal microbial knowledge; 3. Knowledge of animal immunization; 4. Biosafety; 5. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	IMPLEMENT PREPARATION OF VACCINATION	**DUTY NO.**	403
TASK TITLE	DETERMINE VACCINE TYPES AND DOSAGE STATISTICS	**TASK NO.**	4031
PERFORMANCE CRITERIA	The person performing this task must be able to determine the type and amount of vaccine to be administered for a particular immunization in accordance with the operating procedures, the relevant safety regulations and technical requirements of the producer, and the actual situation of the animals to be immunized.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Immunization plan (immunization guidelines); 2. Instructions for each vaccine. 3. Syringes and needles 4. Person protective equipment 5. Restraining equipment for specif animal species to be immunized. 6. Safety gear.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Determine the type of vaccine to be administered for this immunization in accordance with the farm or regional immunization plan (immunization guidelines); 2. Survey and count the number (household) of livestock to be exempted on farms in the area covered by this survey; 3. Count the number of vaccines, according to the number of shots in the vaccine programme, exempted animals and the vaccine instructions. 4. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Determine whether the type of vaccine meets the requirements of the immunization plan; 1.2 Determine the correct method of vaccine administration; 1.3 Keep records of number and types/species of vaccinated animals. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of vaccine selection; 2.2 Principle of vaccine dosage. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Vaccine selection methods;

	3.2 Vaccine dosage calculation methods. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Determination of vaccine types and dosage is performed according to the immunization plan.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal epidemic prevention; 2. Animal immunology knowledge; 3. Occupational health and safety; 4. Biosafety; 5. Biological waste disposal methods. 6. Animal welfare and safety 7. Animal behaviour 8. Animal restraint techniques

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	IMPLEMENT PREPARATION OF VACCINATION	**DUTY NO.**	403
TASK TITLE	CARRY OUT PROCUREMENT AND PRESERVATION OF VACCINES	**TASK NO.**	4032
PERFORMANCE CRITERIA	The person performing this task must be able to procure, transport and preserve vaccines, according to the operating procedures of the post and the actual situation on the farm or area.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior technicians or livestock veterinary engineers. The tools and equipment to be used include: 1. Vaccine transportation box; 2. Ultra-low temperature freezer; 3. Liquid nitrogen tank; 4. Refrigerated container; 5. Autoclave; 6. Large capacity vacuum flask with dry ice; 7. Drying oven. 8. Safety gear		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Purchase and record vaccines as required; 2. Transport vaccines as required; 3. Arrange the vaccines by names, batch numbers and classifications and store them according to the prescribed temperature requirements; 4. Carry out destruction of expired vaccines, substandard vaccines, etc. 5. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Inspect vaccine conformity; 1.2 Inspect vaccine preservation regularity. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Criteria for judging eligible vaccines; 2.2 Vaccine transportation and storage conditions. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Methods of determining eligible vaccines; 3.2 Methods of transportation and preservation of different animal vaccines; 3.3 Handling of expired and substandard vaccines. **4.0 Essential Skills** 4.1 Communication skills;

	4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Procurement and preservation of vaccines is conducted according to the operating procedures and actual situations of the farm or region.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal epidemic prevention; 2. Animal immunology knowledge; 3. Occupational health and safety; 4. Biosafety; 5. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	IMPLEMENT PREPARATION OF VACCINATION	**DUTY NO.**	403
TASK TITLE	DETERMINE THE ROUTE, METHOD AND DATE OF IMMUNIZATION	**TASK NO.**	4033
PERFORMANCE CRITERIA	The person performing this task must be able to determine the route, method and date of immunization and prepare the equipment and medicines in accordance with the operating procedures of the post and the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Immunization plan (immunization guidelines); 2. Instructions for each vaccine; 3. Immunization equipment such as syringes; 4. Medicines needed for immunisation such as disinfectants and stress medication. 5. PPEs 6. Restraint equipment. 7. Safety gear.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Start inspecting livestock to be vaccinated 1 day in advance according to the immunization plan; 2. Determine specific vaccination dates based on the health status of the livestock to be inspected for vaccination and the immunization plan; 3. Determine the route of immunization in accordance with the immunization plan and be able to prepare the relevant equipment and medicines in accordance with the route of immunisation. 4. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Determine the route and method of immunization according to the characteristics of the vaccine; 1.2 Determine specific vaccination dates based on the health status of the livestock; 1.3 Prepare equipment and medicines according to the route of immunization. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of immunological contraindication; 2.2 Principle for the application of immunological devices and medicines. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Criteria for judging the condition of livestock and poultry immunization.

	4.0 Essential Skills 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Immunization routes, methods and dates are determined in conjunction with the immunization plan and the health status of the livestock and poultry, and the preparation of medicines and equipment for immunization preparation is done.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal epidemic prevention; 2. Animal immunology knowledge; 3. Knowledge of animal clinical diagnosis and treatment; 4. Occupational health and safety; 5. Biosafety; 6. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	IMPLEMENT PREPARATION OF VACCINATION	**DUTY NO.**	403
TASK TITLE	PERFORM ANIMAL TAGGING AND RECORDING	**TASK NO.**	4034
PERFORMANCE CRITERIA	The person performing this task must be able to tag the immunization markings and record the vaccinated animals in accordance with the operating procedures of the post and the actual situation on the farm.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Ear-tag pliers; 2. Ear tags; 3. Marking pen; 4. Disinfectant; 5. Cotton swab; 6. Specialized pot; 7. Tweezers. 8. Safety gear.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Provide immunization ear tags for immunized animals; 2. Establish immunization files for immunized animals; 3. Regularly inspect the livestock and poultry immunization markings. 4. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Fix immunization ear tags; 1.2 Complete the animal vaccination file. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle for the application of animal immunisation markings; 2.2 Principle of animal vaccination file management. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Requirements for the location of animal immunisation markings to be worn; 3.2 Requirements for the time of animal immunisation markings to be worn; 3.3 Criteria for the selection of situations for the replacement of animal immunization markings;

	3.4 Standards for what needs to be completed in the immunisation file. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Vaccinated Animals are tagged with ear tags and vaccination files are filled out according to the protocols and the actual situation on the farm
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal epidemic prevention; 2. Animal immunology knowledge; 3. Knowledge of animal clinical diagnosis and treatment; 4. Occupational health and safety; 5. Biosafety; 6. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	PERFORM PREPARATION OF EXPERIMENTAL MATERIALS	DUTY NO.	404
TASK TITLE	IDENTIFY COMMONLY-USED EQUIPMENT	TASK NO.	4041
PERFORMANCE CRITERIA	The person performing this task must be able to identify and use the experimental equipment in accordance with the operating procedures of the actual experimental situation.		
RANGE STATEMENT	The task can be performed in farms or animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Animal internal medicine equipment such as gastric catheters, syringes, veterinary metal syringes, veterinary thermometers, veterinary stethoscopes, intravenous catheters, openers, inspection gloves; 2. Animal surgical equipment, such as scissors, scalpels, scalpel blades, needle holders, haemostatic forceps, tissue forceps, surgical forceps, bandage forceps, intestinal forceps, accessory forceps, suture needles, sutures, bandages, autoclaves, surgical gowns, instrument wraps; 3. Animal breeding and obstetric equipment such as sperm guns, rectal examination gloves, breast feeders, obstetric ropes, obstetric rope guides, obstetric hooks, obstetric forceps, obstetric coulters, hidden blade knives, finger knives, obstetric knives, obstetric chisels; 4. Animal quarantine equipment, bone hacking knives, bone hammers, bone saws, cartilage scissors, tissue cutting knives, bone knives, bone chisels, three-clawed hooks, tissue pulling hooks, skinning knives, frozen meat cutting knives, sharpening sticks, brain knives, scalpels, intestinal scissors, surgical scissors, tissue forceps, tape measures, magnifiers, sterile sealed sampling bags; 5. Veterinary equipment, such as phlebotomy kits. 6. Sample collection and transportation kits depending on the need, may include sample bottles, boxes, liquid nitrogen tank 7. Sample processing chemicals including ethanol, methanol, formaldehyde, glycerol, isopentane 8. Relevant disinfects and PPEs. 9. Safety gear.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Identify the instruments used for different treatment tasks; 3. Check the effectiveness of device identification use; 4. Clean the tools, equipment and	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Develop protocols for the use of animal medicine equipment; 1.2 Develop protocols for the use of animal surgery equipment; 1.3 Develop protocols for the use of animal breeding and

workplace; 5. Store tools and equipment safely. 6. Observe health, occupational and environmental safety rules and regulations.	obstetric equipment; 1.4 Establish protocols for the use of animal quarantine equipment. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Environmental principle for the application of different types of instruments. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Identification and use of commonly-used equipment. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	In accordance with technical specifications, commonly-used devices are identified for use.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Safety operation in the identification of the use of diagnostic equipment in animal medicine; 2. Safety operation in the identification of the use of diagnostic equipment in animal surgery; 3. Safety operation of the identification of the use of animal quarantine equipment; 4. Safety operation in the identification of the use of animal breeding and obstetric equipment; 5. Safety operation in the identification of the use of veterinary equipment; 6. Operating policies and procedures for the use of device identification; 7. Occupational health and safety; 8. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	PERFORM PREPARATION OF EXPERIMENTAL MATERIALS	**DUTY NO.**	404
TASK TITLE	CARRY OUT WASHING, DRYING, PACKAGING AND STERILISATION OF EQUIPMENT	**TASK NO.**	4042
PERFORMANCE CRITERIA	The person performing this task must be able to wash, dry, pack and sterilise the equipment in accordance with the operating procedures of the post and the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in laboratories or animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Brushes; 2. Instrument trays; 3. Drying ovens; 4. Sterilization indicator strips; 5. Pressure cookers; 6. Instrument wraps; 7. Personal protective equipment, such as masks, doctor's clothes and gloves. 8. Safety gear.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Correctly clean, dry, dress and sterilize surgical instruments; 2. Correctly use pressure cookers; 3. Check the sterilization of instruments; 4. Clean the tools, equipment and workplace; 5. Store tools and equipment safely. 6. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Establish protocols for washing, drying, dressing and autoclaving of equipment; 1.2 Evaluate the effectiveness of washing, drying, packaging and sterilisation of equipment. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of the necessity of washing, drying and sterilising instruments. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Criteria for the selection of technical parameters for washing, drying, packaging and sterilisation of equipment.

	4.0 Essential Skills 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Animal surgical equipment is washed, wrapped and sterilised in accordance with technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Animal microbial knowledge; 2. Animal epidemic prevention knowledge; 3. Biosafety; 4. Occupational health and safety; 5. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	PERFORM PREPARATION OF EXPERIMENTAL MATERIALS	**DUTY NO.**	404
TASK TITLE	CARRY OUT PREPARATION OF COMMONLY-USED INSTRUMENTS AND EQUIPMENT	**TASK NO.**	4043
PERFORMANCE CRITERIA	The person performing this task must be able to prepare the apparatus for the purpose of treatment of the animal in accordance with the operating rules of the post and the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Diagnosis and treatment plan (diagnosis and treatment guidelines); 2. Diagnostic and treatment kits, such as animal surgical kits, puncture kits. 3. Safety gear		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Identify livestock and poultry morbidity; 2. Determine how the disease is treated; 3. Develop a treatment workflow in accordance with the treatment work plan; 4. Prepare the relevant equipment in accordance with the treatment. 5. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Inspect that apparatus and equipment meet the requirements; 1.2 Inspect whether the equipment is complete: **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of the necessity of choosing different instruments under the jurisdiction of different treatments for different diseases. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Process of treating different diseases; 3.2 Method of selecting the treatment instruments. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	In the context of the disease treatment, the treatment equipment is identified and prepared accordingly.

CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal clinical diagnosis and treatment; 2. Animal medicine knowledge; 3. Knowledge of animal surgery; 4. Biosafety; 5. Occupational health and safety; 6. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	PERFORM PREPARATION OF EXPERIMENTAL MATERIALS	**DUTY NO.**	404
TASK TITLE	CARY OUT PREPARATION OF COMMONLY-USED DRUGS AND REAGENTS	**TASK NO.**	4044
PERFORMANCE CRITERIA	The person performing this task must be able to prepare drugs and reagents for animal treatment in accordance with the operating procedures of the post and the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Diagnosis and treatment plan (diagnosis and treatment guidelines); 2. Treatment reagents, drugs such as saturated saline, methylene blue, vitamins, saline, antibiotics, anthelmintics, etc. 3. Safety gear.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: The person performing this task must be able to do the following: 1. Identify livestock and poultry morbidity; 2. Determine how the disease is treated; 3. Prepare the relevant drugs in accordance with their prescriptions; 4. Prepare the relevant reagents in accordance with the treatment. 5. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Develop preparation protocols for drugs and reagents; 1.2 Evaluate the effectiveness of drugs and reagent preparation. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principles for selecting the drugs and reagents needed for treatment. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Methods of selecting the drugs needed for the treatment of different diseases; 3.2 Methods of preparation of reagents for different treatment tasks. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.

DESCRIPTION OF THE END PRODUCT / SERVICE	Preparation of commonly-used drugs and reagents is performed as per approved procedures and the severity of the disease.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal clinical diagnosis and treatment; 2. Animal medicine knowledge; 3. Knowledge of animal surgery; 4. Knowledge of animal infectious diseases; 5. Knowledge of animal parasites; 6. Biosafety; 7. Occupational health and safety; 8. Biological waste disposal methods.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	CONDUCT CLINICAL EXAMINATION	DUTY NO.	405
TASK TITLE	PERFORM BASIC CLINICAL EXAMINATION	TASK NO.	4051
PERFORMANCE CRITERIA	The person performing this task must be able to carry out a direct examination of the sick animal in accordance with the operating procedures of the post and the actual situation of the animals, and be able to understand it from a clinical diagnostic point of view, through the investigation of questioning and the use of the examiner's eyes, ears, hands, nose and other organs.		
RANGE STATEMENT	The task can be performed in farms or animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Protective ring/Elizabeth collar; 2. Palpation supplies, such as probes and needles; 3. Percussion supplies, such as hammers and boards; 4. Stethoscopic supplies, such as a stethoscope; 5. Personal protective equipment, such as masks, doctor's clothes and gloves. 6. Other restraining equipment depending on the animal species being examined. 7. Safety gear.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Select appropriate operation tools and equipment for this task; 2. Obtain information from the husbandry manager about the condition and history of the animal's illness; 3. Check the whole body or local manifestations of the animal being examined; 4. Touch on and feel tissues and organs; 5. Clarify the site of percussion and the state and nature of the lesion represented by the acoustic characteristics; 6. Determine the relationship between abnormal sounds produced by the functional activity of certain organs in the body and disease;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Develop an examination plan for questioning, visualisation, palpation, percussion, auscultation and sniffing; 1.2 Evaluate the effectiveness of the clinical examination. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of the need to apply the basic methods of clinical examination. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Criteria for systemic or local manifestations of the phenomenon in normal animals; 3.2 Tissue and organ lesions cause different

7. Determine the relationship between abnormal odours and disease in sick animals; 8. Clean the tools, equipment and workplace; 9. Store tools and equipment safely. 10. Observe health, occupational and environmental safety rules and regulations.	characteristics of touch, sound and smell. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Basic clinical examination is carried out in accordance with approved technical specifications and the actual situation of the animals.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomy and physiology 2. Animal pathology knowledge; 3. Knowledge of animal clinical diagnosis and treatment; 4. Knowledge of animal behavior; 5. Operating policies and procedures of basic clinical examination; 6. Occupational health and safety; 7. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	CONDUCT CLINICAL EXAMINATION	DUTY NO.	405
TASK TITLE	PERFORM GENERAL EXAMINATION	TASK NO.	4052
PERFORMANCE CRITERIA	The person performing this task must be able to check the overall and general condition of the animal according to the operating procedures and the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in farms or animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Protective ring/Elizabeth collar; 2. Instruments to measure body temperature, such as thermometers; 3. Instruments for measuring respiration, such as stethoscopes and timers; 4. Instruments for measuring blood pressure, such as Doppler blood pressure gauges; 5. Personal protective equipment, such as masks, doctor's clothes and gloves.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Select appropriate tools and equipment; 3. Choose Restraint mode; 4. Examine the whole-body nutritional status of the examined animal in terms of mental state, physical development, nutritional status, posture and body condition, and locomotion and behaviour; 5. Determine the body temperature, pulse, respiration and blood pressure of the animal being examined; 6. Examine the condition of the coat, skin and subcutaneous tissue of the animal examined; 7. Examine the secretions, eyelids, conjunctival colour, sclera and pupils of the animals examined; 8. Examine the size, shape, stiffness, sensitivity and mobility of the superficial lymph nodes of the animal being examined; 9. Keep track of examination results;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Develop clinical examination plans; 1.2 Examine general nutritional status, coat and skin, visible mucous membranes, superficial lymph nodes and lymphatic vessels; 1.3 Evaluate the effectiveness of the general clinical examination. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Apply the principle of the necessity of clinical general examination. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Methods of examination of the nutritional status of the whole body; 3.2 Methods of measuring body temperature, pulse, respiration and blood pressure; 3.3 Coat and skin examination methods; 3.4 Visual mucosal examination methods; 3.5 Superficial lymph node and lymphatic vessel

10. Clean the tools, equipment and the workplace; 11. Store tools and equipment safely. 12. Observe health, occupational and environmental safety rules and regulations.	examination methods. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	General examination is carried out in accordance with approved technical specifications and the actual situation of the animals
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomical physiology; 2. Animal pathology knowledge; 3. Knowledge of animal clinical diagnosis and treatment; 4. Knowledge of animal behavior; 5. Operating policies and procedures of basic clinical examination; 6. Occupational health and safety; 7. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CONDUCT CLINICAL EXAMINATION	**DUTY NO.**	405
TASK TITLE	CARRY OUT SYSTEM INSPECTION	**TASK NO.**	4053
PERFORMANCE CRITERIA	The person performing this task must be able to check the systematic condition of the animal according to the operating procedures and the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in farms or animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Protective rings/Elizabeth collars; 2. Stethoscopes and timers; 3. Plessimeters; 4. Mouth gags; 5. Personal protective equipment, such as masks, doctor's clothes and gloves. 6. Safety gear.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Select appropriate tools and equipment; 3. Choose Restraint mode; 4. Examine the heart and capillary refill times of the animals examined; 5. Examine the size, shape, symmetry and sensitivity of the thorax and chest wall of the animal being examined; 6. Examine the smell of the exhaled gas of the animal being examined; 7. Examine the noses and nasal fluids of the animals examined; 8. Examine the oral, pharyngeal and gastrointestinal motility of the digestive system of the examined animal; 9. Keep track of examination results; 10. Clean the tools, equipment and the workplace. 11. Observe health, occupational and environmental safety rules and	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Develop systmatic inspection plans; 1.2 Examine the cardiovascular system, the thorax, the chest wall and the respiratory and digestive systems; 1.3 Evaluate the effectiveness of clinical systems examination. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of the need to use clinical systems examination. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Methods of examination of the cardiovascular system; 3.2 Methods of examination of the thorax, chest wall and respiratory system; 3.3 Methods of examination of the digestive system.

regulations.	**4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	System inspection is carried out in accordance with technical requirements and the actual situation of the animals
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomical physiology; 2. Animal pathology knowledge; 3. Knowledge of animal clinical diagnosis and treatment; 4. Knowledge of animal behavior; 5. Operating policies and procedures of basic clinical examination; 6. Occupational health and safety; 7. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	OCCUPATION CODE	
DUTY TITLE	CONDUCT CLINICAL EXAMINATION	DUTY NO.	405
TASK TITLE	CARRY OUT SPECIAL EXAMINATION	TASK NO.	4054
PERFORMANCE CRITERIA	The person performing this task must be able to check the special condition of the animal according to the operating procedures of the post and the actual situation of the animals.		
RANGE STATEMENT	The task can be performed in animal hospitals under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Protective ring/Elizabeth collars; 2. X-ray examination equipment, such as X-ray detectors; 3. Ultrasound examination equipment, such as the Doppler ultrasound diagnostic device; 4. Endoscopy equipment, such as pet endoscopes; 5. ECG examination equipment, such as electrocardiographs; 6. Personal protective equipment, such as masks, doctor's clothes and gloves. 7. Safety gear.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Select appropriate tools and equipment; 3. Choose Restraint mode; 4. Fix dogs and cats with bare hands; 5. Perform Inspection using an x-ray detector; 6. Perform Ultrasound diagnosis using a diagnostic ultrasound machine; 7. Examine with a pet endoscope; 8. Examine with an electrocardiograph; 9. Keep track of examination results; 10. Clean the tools, equipment and the workplace; 11. Store tools and equipment safely. 12. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Make Restraint plans; 1.2 Develop X-ray examination plans; 1.3 Develop ultrasound examination plans; 1.4 Develop endoscopy plans; 1.5 Develop ECG examination plans; 1.6 Evaluate the effectiveness of the special clinical examination. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Apply the principle of the necessity of clinical special examination. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Criteria for the selection of clinically specific examination modalities; 3.2 X-ray examination methods;

	3.3 Ultrasound examination methods; 3.4 Endoscopic examination methods; 3.5 ECG examination methods. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Special examination is carried out in accordance with approved technical requirements and the actual situation of the animals.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal anatomical physiology; 2. Knowledge of imaging; 3. Knowledge of animal clinical diagnosis and treatment; 4. Knowledge of animal behavior; 5. Operating policies and procedures of basic clinical examination; 6. Occupational health and safety; 7. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	IMPLEMENT BIOSAFETY PROTECTION	**DUTY NO.**	406
TASK TITLE	CONDUCT PERSONAL BIOSAFETY PROTECTION	**TASK NO.**	4061
PERFORMANCE CRITERIA	The person performing this task must be able to take personal biosafety precautions in accordance with the operating procedures of the post.		
RANGE STATEMENT	The task can be performed under the supervision of the intermediate or senior livestock veterinary technician or livestock veterinary engineer during disease treatment, vaccination, rescue, grooming or breeding work. The tools and equipment to be used include: 1. Masks; 2. Protective masks and goggles; 3. Gloves; 4. Jumpsuits; 5. Shoe covers; 6. Protective helmets. 7. Safety gear		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Select appropriate tools and equipment; 3. Select the protection mode; 4. Wear protective tools and equipment; 5. Remove personal protective equipment; 6. Handle protective equipment; 7. Keep personal protective equipment. 8. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Develop a personal biosafety protection plan; 1.2 Evaluate the effectiveness of personal biosafety protection. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of personal biosafety protection; 2.2 Principle of the need for personal biosafety protection. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Methods of selection of various protective tools and equipment; 3.2 Methods of dismounting protective tools and equipment. **4.0 Essential Skills** 4.1 Communication skills;

	4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Personal biosafety protection is done in accordance with approved technical requirements and the actual task.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal infectious diseases; 2. Animal microbial knowledge; 3. Knowledge of animal disease prevention and quarantine; 4. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	IMPLEMENT BIOSAFETY PROTECTION	**DUTY NO.**	406
TASK TITLE	PERFORM BIOSAFETY MANAGEMENT	**TASK NO.**	4062
PERFORMANCE CRITERIA	The person performing this task must be able to take biosafety precautions in accordance with the operating procedures of the post.		
RANGE STATEMENT	The task can be performed under the supervision of the intermediate or senior livestock veterinary technician or livestock veterinary engineer during disease treatment, vaccination, rescue, grooming or breeding work. The tools and equipment to be used include: 1. Biosafety cabinets; 2. Temporary storage containers for discarded sharps; 3. First-aid kits and eye washers; 4. Disinfection equipment and disinfectants. 5. Safety gear.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Design biosafety management methods; 3. Establish a quality and biosafety management system; 4. Manage the relevant personnel; 5. Manage toxic and hazardous substances; 6. Manage the environment and equipment; 7. Manage medical waste; 8. Take care of personal protection and emergency response. 9. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Design biosafety management schemes; 1.2 Evaluate the effectiveness of biosafety management implementation. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of the need for biosafety management. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Approach to biosafety management programme design; 3.2 Constituent structures and methods of implementation of biosafety management. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Biosafety management is implemented in accordance with approved technical requirements and actual tasks.

CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal infectious diseases; 2. Animal microbial knowledge; 3. Knowledge of animal disease prevention and quarantine; 4. Disposal method of medical waste.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CONDUCT APPEARANCE AND HEALTH ASSESSMENT	**DUTY NO.**	407
TASK TITLE	CARRY OUT APPEARANCE ASSESSMENT	**TASK NO.**	4071
PERFORMANCE CRITERIA	The person performing this task must be able to assess an animal's appearance identifications in accordance with the operating procedures of the post.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Body size meter; 2. Measuring stick; 3. Straightedge; 4. Straight caliper; 5. Circular caliper; 6. Tape measure; 7. Animal skeletal specimen. 8. Safety gear.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Develop a method of assessment of appearance; 3. Understand the characteristics and physiology of different animal species; 4. Determine the sequence of the steps in the appearance identification; 5. Assess fat condition; 6. Assess muscle development; 7. Determine the condition of limb movements, posture and gait patterns; 8. Assess the body type. 9. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Identify the external appearance of different animals; 1.2 Evaluate the effectiveness of appearance assessment. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of the need to carry out appearance assessment. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Criteria for assessing appearance; 3.2 Steps for appearance assessment. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.

DESCRIPTION OF THE END PRODUCT / SERVICE	The appearance assessment of different animals is performed in accordance with approved technical requirements and the actual task.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. animal breeding; 2. animal behavior; 3. animal physiology and pathology; 4. animal nutrition.

OCCUPATION	LIVESTOCK VETERINARY TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CONDUCT APPEARANCE AND HEALTH ASSESSMENT	**DUTY NO.**	407
TASK TITLE	CARRY OUT HEALTH ASSESSMENT	**TASK NO.**	4072
PERFORMANCE CRITERIA	The person performing this task must be able to assess the health status of the animal in accordance with the operating procedures of the post.		
RANGE STATEMENT	The task can be performed in farms under the supervision of middle and senior livestock veterinary technicians or engineers. The tools and equipment to be used include: 1. Equipment and tools for the detection of common epidemics; 2. Insect and rodent control and bird control equipment. 3. Safety gear.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Observe the health and safety prevention measures; 2. Design health assessment methods; 3. Choose a reasonable approach to health status assessment depending on the use; 4. Assess the clinical health of the animal. 5. Observe health, occupational and environmental safety rules and regulations.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Identify the health status of different animals; 1.2 Evaluate health status assessment effects. **2.0 Principle** The person performing this task must be able to explain the following principles: 2.1 Principle of the need to conduct health status assessments. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Health assessment criteria; 3.2 Steps for health assessment. **4.0 Essential Skills** 4.1 Communication skills; 4.2 Customer service skills; 4.3 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The health assessment of animals is done in accordance with approved technical requirements and the actual task.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Knowledge of animal breeding; 2. Knowledge of animal behavior; 3. Knowledge of animal physiology and pathology;

	4. Knowledge of animal nutrition.

TABLE 1: LIVESTOCK VETERINARY TECHNICIAN DACUM TABLE F0R NTA LEVEL 4

DUTIES	TASKS	ENABLERS
1.0 Perform Restraint of animals	1.1 Conduct Restraint of pigs. 1.2 Conduct Restraint of horses. 1.3Cconduct Restraint of cattle. 1.4 Conduct Restraint of sheep. 1.5 Carry out Restraint of dogs and cats.	**General skills and knowledge** · Communication skills · Use of Restraint devices · Skills and knowledge of approaching animals · Knowledge of animal anatomy · Clinical knowledge of animal treatment · Knowledge of animal behaviour · Knowledge of biosafety · Medical waste disposal methods **Tools and equipment** · Personal protective equipment such as masks, doctors' gowns and gloves · Restraint tools **Materials** · Specification-compliant Restraint materials **Requirements for employees** Cooperation, conscientiousness and meticulousness professionalism, honesty and trustworthiness and with reasonable time management
2.0 Conduct disinfection	2.1 Carry out selection and preparation of disinfectants. 2.2 Carry out disinfection of instruments. 2.3 Carry out environmental disinfection. 2.4 Carry out disinfection of breeding housing. 2.5 Carry out disinfection of housing with animals.	**General skills and knowledge** · Identification of classes of disinfectants · Pharmacological knowledge of commonly-used disinfectants · Calculation of disinfectant dosage · Commonly used disinfectant preparation methods · Selection, use and maintenance of commonly-used disinfection instruments and equipment · Clean of disinfection tools, equipment and workplaces · Disposal methods for disinfectant preparation waste · Knowledge of animal immunization · Knowledge of biosafety · Methods of sterilisation of instruments and situations in which they can be used

DUTIES	TASKS	ENABLERS
		· Disinfection of clinical instruments · Disinfection of feeding equipment · Disinfection of means of delivery · Air disinfection operations · Manure disinfection operations in livestock buildings · Farm effluent disinfection operations · Routine disinfection operations in housings · Disinfection of contaminated housings · Development of a disinfection plan for equipment, housings and with animals · Preparation before disinfection with animals · Disinfection operations with animals · Disinfection frequency · Disinfection effectiveness evaluation **Tools and equipment** · Ambient thermometers and hygrometers · Medical protective masks · Helmets · Goggles · Rubber gloves · Rubber Boots · Cleaning equipment · Scrubbing equipment · Mist spraying equipment · High-pressure water gun · Ultraviolet lamp · Flame disinfection guns · Balance · Measuring cylinder · Drying oven · Pressure sterilizers · Soft brush · Sterilization cabinet **Materials** · Peroxyacetic acid, decylammonium bromide solution, bromogeramine solution, sodium hypochlorite solution, glutaraldehyde solution, potassium peroxymonosulfate complex solution; · Culture Medium · Special PH test paper · Neutralizer **Requirements for employees**

DUTIES	TASKS	ENABLERS
		Safety consciousness, cooperation, conscientiousness and meticulousness professionalism, honesty and trustworthiness and with reasonable time management
3.0 Implement preparation of vaccination	3.1 Determine vaccine types and dosage statistics. 3.2 Carry out procurement and preservation of vaccines. 3.3 Determine the route, method and date of immunization. 3.4 Perform animal tagging and recording.	**General skills and knowledge** · Measurement of animal body temperature · Identification of animal breathing and heart sounds · Animal care · Knowledge of vaccine preservation · Knowledge of animal immunization · Knowledge of animal pharmacology · Knowledge of biosafety · Medical waste disposal methods **Tools and equipment** · Thermometer · Vaccine transportation box · Ultra-low temperature freezer · Liquid nitrogen tank · Refrigerated container · Autoclave **Materials** · Disinfectant · Syringe · Ear-tag plier · Ear tag · Marking pen · Disinfectant · Cotton swab · Tweezers **Requirements for employees** Cooperation, conscientiousness and meticulousness professionalism, honesty and trustworthiness and with reasonable time management
4.0 Perform preparation of experimental materials	4.1 Identify commonly-used equipment. 4.2 Carry out washing, drying, packaging and sterilization of equipment. 4.3 Carry out preparation of commonly-used instruments and	**General skills and knowledge** · Use of communication skills to work with others, communicate with livestock owners and report to superiors · Use of disinfection equipment · Skills and knowledge of aseptic practice · Knowledge of animal pharmacology · Chemistry laboratory skills · Knowledge of biosafety

DUTIES	TASKS	ENABLERS
	equipment. 4.4 Carry out preparation of commonly-used drugs and reagents.	· Medical waste disposal methods **Tools and equipment** · Personal protective equipment such as masks, doctors' gowns and gloves · Chemistry experiment tools **Materials** · Sterile materials, drugs, reagents that meet specifications **Requirements for employees** Cooperation, conscientiousness and meticulousness professionalism, honesty and trustworthiness and with reasonable time management
5.0 Conduct clinical examination	5.1 Perform basic clinical examination. 5.2 Perform general examination. 5.3 Carry out system inspection. 5.4 Carry out special examination.	**General skills and knowledge** · Use of communication skills to work with others, communicate with livestock owners and report to superiors · Use of medical instruments · Skills and knowledge of clinical examination · Knowledge of animal physiology and pathology · Animal physiological and pathological examination skills · Knowledge of biosafety · Medical waste disposal methods **Tools and equipment** · Personal protective equipment such as masks, doctors' gowns and gloves · Clinical examination tools **Materials** Inspection instruments, equipment, materials and medicines that meet specifications **Requirements for employees** Cooperation, conscientiousness and meticulousness professionalism, honesty and trustworthiness and with reasonable time management
6.0 Implement biosafety	6.1 Conduct personal biosafety protection.	**General skills and knowledge** · Laboratory safety knowledge

DUTIES	TASKS	ENABLERS
protection	6.2 Perform biosafety management	· Knowledge of protection against pathogenic bacteria · Virus protection knowledge · Disinfectant preparation methods · Medical waste management · Environmental sampling methods · Disease collection methods · Methods of 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 **Tools and equipment** · Veterinary thermometer · Stethoscope · Disposable syringe · Mask · Disposable latex glove and shoe covers · Protective veils, goggles, protective clothing · Platform scales or weighing scales · Biosafety cabinet · Temporary storage containers for discarded sharps · Scalpels, tweezers, haemostatic forceps · Veterinary blood collectors · Electrothermostat · Benchtop low-speed centrifuge · Pipette · 96-well V-plate · ELIASA · Tray balance · Oscillator · Disposable latex gloves · Protective clothing · Refrigerator **Materials** · Disinfectant · Standard antigenic substances

DUTIES	TASKS	ENABLERS
		· Standard positive sera · Saline · Glycerin · Alcohol · Standard positive sera · Anticoagulants · ELISA antibody detect kit · Deionized water **Requirements for employees** Cooperation, conscientiousness and meticulousness professionalism, honesty and trustworthiness and with reasonable time management
7.0 Conduct appearance and health assessment	7.1 Carry out appearance assessment. 7.2 Carry out health assessment.	**General skills and knowledge** · Identification of the type of animal · Familiarity with the characteristics of different animal species · Familiarity with the normal movement posture of animals · Familiarity with the normal mental state of animals · Assessment of animal fatness · Assessment of body size · Measurement of animal respiratory count · Measurement of animal body temperature · Measurement of animal paulse · Clinical manifestations of common animal diseases · Prevention of common epidemics · Knowledge of virus protection · Proper disposal of medical waste · Environmental sampling · Pathological material collection · Serum isolation and preservation · Serum agglutination test · Polymerase chain reaction test operation · 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 **Tools and equipment**

DUTIES	TASKS	ENABLERS
		· Veterinary thermometer · Stethoscope · Timer · Disposable syringe · Mask · Disposable latex glove and shoe covers · Protective veils, goggles, protective clothing · Platform scales or weighing scales · Body size meter · Measuring stick · Straightedge · Straight caliper · Measuring tape · Circular caliper · Animal skeletal specimens · Scalpels, tweezers, haemostatic forceps · Veterinary blood collectors · Electrothermostat · Benchtop low-speed centrifuge · Pipette · 96-well V-plate · ELIASA · Tray balance · Oscillator · Disposable latex gloves · Protective clothing · Refrigerator **Materials** · Disinfectant · Standard antigenic substances · Substrate · Standard positive sera · Standard positive sera · Anticoagulants · ELISA antibody detect kit · Deionized water **Requirements for employees** Cooperation, conscientiousness and meticulousness professionalism, honesty and trustworthiness and with reasonable time management