



Small Animal Science and Technology

General Assessment Information

Blueprint Contents

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Test Type: The Small Animal Science and Technology industry-based credential is included in NOCTI's Job Ready assessment battery. Job Ready assessments measure technical skills at the occupational level and include items which gauge factual and theoretical knowledge. Job Ready assessments typically offer both a written and performance component and can be used at the secondary and post-secondary levels. Job Ready assessments can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from secondary, post-secondary, and business/industry representatives from the states of Michigan, Pennsylvania, and Virginia.



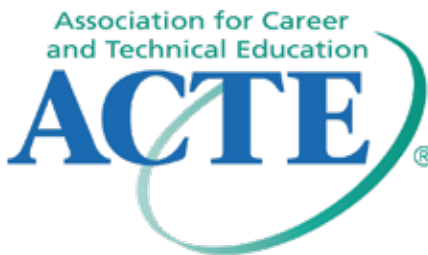
51.0808- Veterinary/Animal Health
Technology/Technician and
Veterinary Assistant



Career Cluster 1-Agriculture, Food,
and Natural Resources



29-2056.00- Veterinary Technologists
and Technicians



The Association for Career and Technical Education (ACTE), the leading professional organization for career and technical educators, commends all students who participate in career and technical education programs and choose to validate their educational attainment through rigorous technical assessments. In taking this assessment you demonstrate to your school, your parents and guardians, your future employers and yourself that you understand the concepts and knowledge needed to succeed in the workplace. Good Luck!



NATIONAL COLLEGE CREDIT RECOMMENDATION SERVICE
University of the State of New York - Regents Research Fund

In the lower division
baccalaureate/associate degree
category, 3 semester hours in
Small Animal Science.

Written Assessment

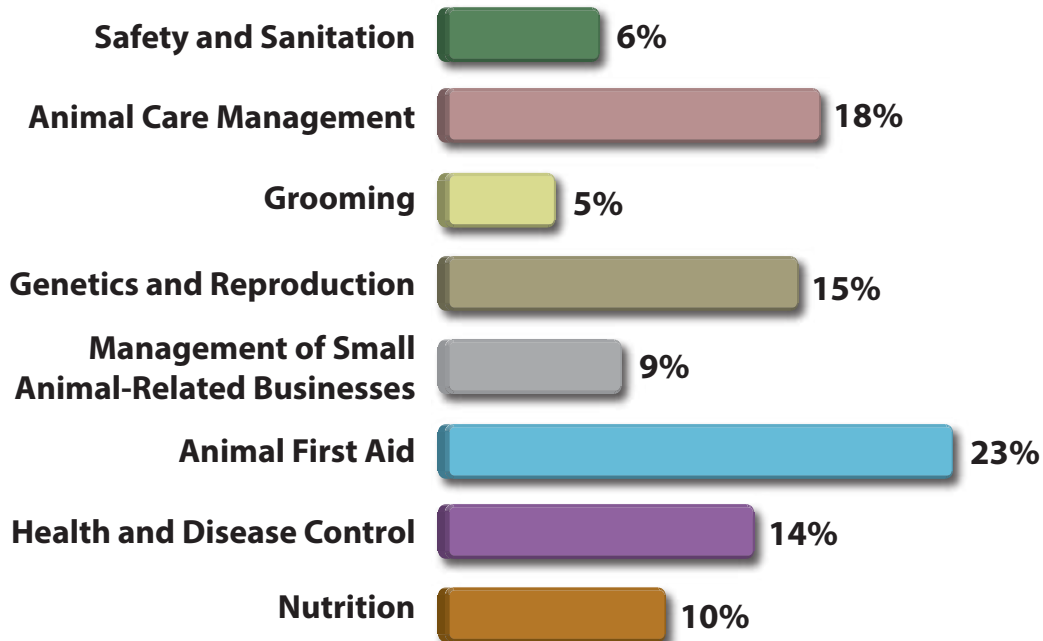
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 196

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Safety and Sanitation

- Maintain a safe and sanitary environment
- Identify zoonotic diseases and modes of transmission/prevention
- Identify and properly handle contaminated and hazardous material and chemicals

Animal Care Management

- Handle and restrain animals for various procedures
- Identify breeds and sex of animals (e.g., dogs, cats, rodents, rabbits)
- Feed and water animals and maintain appropriate environment
- Identify and manage care for animals at different life stages
- Gather and record health data on animals
- Recognize and interpret animal body language
- Identify external anatomy and directional terminology
- Recognize issues of animal overpopulation and discuss prevention methods and benefits
- Identify training and enrichment methods and equipment

Grooming

- Select, identify, and properly use grooming equipment
- Select and prepare shampoos and rinses
- Identify and describe other various grooming procedures and methods (e.g., ears, coat, nails, and glands)



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Specific Standards and Competencies (continued)

Genetics and Reproduction

- Define specific genetic and reproductive terminology, including sex-linked traits
- Use the Punnett Square to solve monohybrid cross and dihybrid cross
- Read and evaluate a pedigree
- Explain factors that affect reproductive health and fertility
- Identify and explain functions of reproductive organs
- Explain the role of hormones and factors that affect them
- Explain different phases of the reproductive/estrous cycle
- List signs of parturition and manage care of newborns

Management of Small Animal-Related Businesses

- Identify appropriate procedures for client and interoffice communications
- Schedule appointments and maintain appointment book
- Record and maintain medical records
- Perform and maintain inventory
- Demonstrate business mathematics



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Specific Standards and Competencies (continued)

Animal First Aid

- Identify medical terminology, equipment, and supplies
- Explain arterial and venous bleeding and identify pressure points
- Identify symptoms and treatment of shock
- Describe appropriate ways to approach and treat a sick or injured animal
- Identify various types of bandages and appropriate applications
- Perform physical assessment/triage, including TPR
- Describe the ABCs of CPR procedures
- Prepare slides and operate various types of microscopes
- Operate scales and weigh/measure animals properly
- Identify and describe routes of medication administration
- Identify surgical instruments and prepare surgical packs
- Calculate dosage rates and conversions



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Specific Standards and Competencies (continued)

Health and Disease Control

- List characteristics of a healthy animal
- Identify common internal and external parasites
- Perform examinations for internal and external parasites (e.g., fecal exams, ear cytology)
- Explain the differences between infectious and non-infectious diseases (e.g., viral, bacterial, fungal)
- Describe the body's response when exposed to disease (e.g., immunity, • antibody/antigen)
- Explain how diseases are transmitted and prevention methods, including quarantine and isolation methods
- Discuss vaccination protocols

Nutrition

- Identify and explain functions of digestive system organs
- Explain digestive characteristics of cecal fermenters, monogastrics, and avian species
- List the six nutrient groups and their function and sources
- Determine types of food to feed different animal species
- Read and interpret feed labels and follow appropriate storage methods
- List diseases associated with nutritional deficiency and/or toxicity



Sample Questions

Ringworm is an example of a/an _____ hazard.

- A. physical
- B. environmental
- C. zoonotic
- D. parasitic

Cats should be restrained by the

- A. legs
- B. hips
- C. muzzle
- D. scruff

Stop the bleeding of a nail by using

- A. cold water
- B. styptic powder
- C. cotton gauze
- D. a bandage

A female cat is called a

- A. boar
- B. queen
- C. bitch
- D. sow

When new stock comes in, the current stock should be

- A. left alone
- B. thrown out
- C. given away to customers and staff
- D. rotated to the top/front

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Sample Questions (continued)

A dog has ingested an unknown toxin. The immediate first-aid treatment is to

- A. induce vomiting by giving pink bismuth
- B. transport to a veterinarian immediately
- C. induce vomiting by giving hydrogen peroxide
- D. let the dog excrete naturally

Why do parasite eggs come to the top during a fecal flotation?

- A. They are attracted to light.
- B. They swim to the top.
- C. They are more dense than the solution.
- D. They are less dense than the solution.

Which of the following needles is the largest?

- A. 18 gauge
- B. 22 gauge
- C. 25 gauge
- D. 30 gauge

An example of a giant rabbit breed is

- A. Holland
- B. Lionhead
- C. Dutch
- D. Flemish

The primary function of the small intestine is to

- A. break down food by muscular movement
- B. add lubricating mucus
- C. absorb water from undigested food
- D. digest and absorb carbohydrates, fats, and proteins

Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 2 hours and 25 minutes

Number of Jobs: 6

Areas Covered:

12% Identify Tools and Equipment

Participant will identify and correctly spell tools and equipment used in small animal science.

31% Proper Restraint and Sex Determination of Small Animals

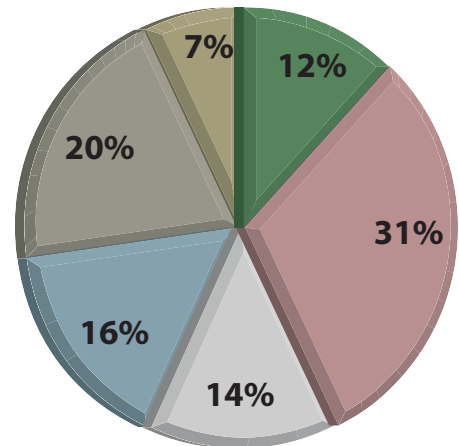
Participant will remove small animals 1, 2, and 3 from a cage, pick it up, restrain it, determine its sex, and return it back to the cage.

14% Identify Parasites

Participant will place slides on a microscope, properly focus them, identify internal parasite eggs, and identify external adult parasites.

16% Fill Syringes

Participant will select and assemble syringes and needles and draw up fluids.



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Areas Covered (continued)

20% Canines: Safety, Handling, Restraint, and External Anatomy Identification

Participant will lift and support and properly place the dog on the table, restrain the dog for blood draw, obtain pulse and respiration and identify external anatomy.

7% Determine Proper Diet for Animals

Participant will correctly match diets to animals.

Sample Job

Identify Tools and Equipment

Maximum Time: 20 minutes

Participant Activity: Identify and correctly spell each of the displayed pieces of equipment used in small animal science.

