

INFORMATION FOR CANDIDATES
ON THE
VETERINARY TECHNICIAN NATIONAL EXAMINATION

Prepared by:



P · E · S

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Sponsored by:



THE VETERINARY TECHNICIAN NATIONAL EXAMINATION

WHAT ARE THE OBJECTIVES OF THE VETERINARY TECHNICIAN NATIONAL EXAMINATION?

The primary objectives of the Veterinary Technician National Examination (VTNE) are:

- To provide examination services to state/provincial boards charged with the credentialing of veterinary technicians.
- To protect the public by ensuring that veterinary technicians demonstrate a specified level of knowledge and skills before entering veterinary technology practice.
- To assess the professional competency of veterinary technicians in terms of their qualifications to enter practice.
- To provide a common standard in the evaluation of candidates that will be comparable from jurisdiction to jurisdiction.
- To contribute to the veterinary technology profession through the development of improved definitions of the relationship between knowledge and professional practice.
- To facilitate interstate/interprovincial licensing reciprocity for practicing veterinary technicians.

HOW IS THE VETERINARY TECHNICIAN NATIONAL EXAMINATION CONSTRUCTED?

The VTNE is a 200-item multiple choice examination prepared under a contractual agreement between the American Association of Veterinary State Boards (AAVSB) and the Professional Examination Service (PES). The Veterinary Technician Testing Committee (VTTC), a 14-member group consisting of veterinarians and veterinary technicians in practice and academia are appointed by the National Association of Veterinary Technicians in America (NAVTA), Association of Veterinary Technician Educators (AVTE), Canadian Association of Animal Health Technologists and Technicians (CAAHTT), Committee on Veterinary Technician Education and Activities, and the AAVSB. The VTTC is responsible for the annual development and validation of the VTNE. The VTTC, under guidance provided by PES, ensures that the VTNE reflects current practice in the field of veterinary technology. PES provides test development and test scoring services for the credentialing of veterinary technicians.

Questions for the VTNE are written by veterinarians and veterinary technicians who represent all aspects of the profession, including academicians, practitioners, members of American Veterinary Medical Association (AVMA) affiliated specialty boards, and the national practice associations. Each newly written question is reviewed and validated by at least three experts in the field of veterinary medicine/technology for content relevance, importance, difficulty, and correctness. These questions are then reviewed and validated by PES's psychometrician and editors to ensure conformity to psychometric principles and to rules of grammar and style.

Once a question is accepted following this validation process, it is placed into PES's computerized item-banking system. The questions for potential use on the VTNE are selected by the computer in accordance with the practice-based examination blueprint (subject-matter outline) developed by the VTTC and PES. The VTTC then reviews the computer-generated test, item by item, making changes and substitutions as necessary. Following this review, the finished examination is prepared by PES for the licensing boards and administering agencies, who are responsible for test delivery and score reporting services to candidates.

WHAT DOES THE VETERINARY TECHNICIAN NATIONAL EXAMINATION COVER?

The VTNE is administered in one test booklet. Since its first administration in 1978, the VTNE examination consists of 200 questions. The scoring of the VTNE is based on the candidate's responses to the 200 questions derived from the test specifications (Appendix A).

The VTNE examination covers seven primary areas of responsibility (domains) within veterinary technology practice and seventeen (17) task area statements obtained from a job analysis study completed by PES for the VTTC. The veterinary technology domains of practice are the major areas of responsibility deemed essential for an entry-level veterinary technician. The task area statements are specific goal-directed actions undertaken by an entry-level veterinary technician within a particular veterinary technology domain of practice. A complete list of the veterinary technology practice domains and task statements are presented within Appendix A on pages 6 to 9.

The VTNE is revised yearly to ensure that the questions reflect current practices and important concepts in veterinary technology.

Forty-eight (48) sample questions similar to the VTNE are included in Appendix B.

HOW IS THE VETERINARY TECHNICIAN NATIONAL EXAMINATION ADMINISTERED?

The VTNE is administered on the **THIRD Friday of January and June** over a four (4) hour time period. Because the VTNE is not designed to test speed of performance, this time allotment is more than sufficient to allow most candidates to complete the test. Exceptions to this procedure would be made for emergency situations (illness, power outages, etc.) and for candidates who wish to use the restrooms during the testing period.

WHAT IS THE ROLE OF THE STATE/PROVINCIAL LICENSING BOARD?

Candidates wishing to take the VTNE must apply for the test through a state or provincial licensing board that regulates the credentialing of veterinary technicians. In each jurisdiction, the board sets the eligibility requirements for the test, processes applications, and sets the fees for the examination. It is the responsibility of each candidate to obtain the necessary application materials at the board from which the licensing credential is being sought. Since the requirements, deadlines, and application fees vary among jurisdictions, candidates are advised to contact their chosen boards well in advance of the examination date. Most boards have a deadline for the receipt of applications **one or two months** prior to the examination date.

The VTTC and PES are committed to the principle of testing individuals in a manner that will yield valid and reliable examination results. In some instances, the examination administration procedures may need to be modified to provide reasonable accommodations for candidates with disabilities.

The state/provincial authority is responsible for approving special accommodations. If you are requesting special accommodations, you should do this at least two months prior to the examination date AND submit the following with your application to the state/provincial authority:

1. The nature of the special accommodation being requested.
2. Documentation completed by a professional with a license or credential appropriate to diagnose and treat the disability. This documentation should include the nature of the disability, identification of the test(s) and protocol(s) used to confirm the diagnosis.
3. A description of past accommodations made for the disability. The state/provincial authority may request further documentation in support of your request.

The addresses of the state and provincial licensing boards in the United States and Canada may be found on AAVSB's Website - www.aavsb.org. Click on State Board Directory. Each jurisdiction is listed with all contact information. If you do not have a computer, you may call or write: AAVSB Executive Director, 4106 Central, Kansas City, MO 64111. Telephone #: 816-931-1504. Fax # 816-931-1604. **Toll Free - 877-698-8482**. Email: info@aavsb.org.

WHEN IS THE VETERINARY TECHNICIAN NATIONAL EXAMINATION ADMINISTERED?

The Veterinary Technician National Examination is now uniformly administered by each contracted state agency and/or provincial licensing board twice a year (the third Friday in January and June). Candidates are reminded that the VTNE is **not** administered in every state or province, **nor** is it administered twice a year in every jurisdiction. Therefore, candidates should contact the specific boards from which they intend to seek licensure for specific test date information and to determine if those states or provinces will be administering or requiring the VTNE.

HOW IS THE VTNE SCORED?

All 200 items that appear on the VTNE are retained for scoring purposes. The choices selected by candidates for each of the 200 items are cross-checked against the official answer key. Each item is scored individually and contributes equally to the candidate's total score. Candidates are encouraged to answer each VTNE item since there is no penalty for guessing.

WHAT IS THE INTERSTATE REPORTING SERVICE?

The Interstate Reporting Service (IRS) serves as a means of facilitating the transfer of candidates' scores on the VTNE between jurisdictions. The IRS reports scores to the boards. The IRS Score Transfer Request Application is found at the back of the handbook.

Participation in the IRS is **entirely voluntary**. Whether or not a candidate decides to register with the IRS, the decision will not affect the reporting of his/her score to the state or province in which he/she takes the test. PES reports VTNE scores to the licensing board of the jurisdiction in which the examination was originally taken at no charge to the candidate.

WHAT SERVICES ARE PROVIDED BY THE INTERSTATE REPORTING SERVICE?

Two services are offered by the IRS, upon a candidate's request:

1) **REGISTRATION - FEE: \$50.00 per examination transfer**

The registering of scores on the Veterinary Technician National Examination (VTNE) with the Interstate Reporting Service may be requested at any time **after taking the examination**. The scores cannot be transferred by PES to another board unless these scores have been initially registered with the IRS. On the IRS application, each candidate must include his/her name, the complete date and place of the examination, the identification number he/she was assigned at the time the examination was taken and the name of the appropriate examination. The candidate's Social Security Number is **not** entered into PES's records, in order to protect the confidentiality of the candidate's score.

A candidate who does not remember his/her identification number can obtain it from the board in the state or province in which the VTNE was taken. PES **cannot** release this information to the candidates.

Candidates are reminded that IRS score report transfers are processed within ten (10) business days of their receipt. Therefore, candidates are encouraged to send in their completed IRS applications as early as possible to ensure that scores are received by the boards on a timely basis.

2) EXPEDITED SERVICE - FEE: \$30.00 per state/province

This service is available for an *additional fee of \$30.00 per board* to which scores are reported. Expedited Service requests are processed within five (5) business days and scores are reported via express mail or by fax. Candidates are encouraged to retain their candidate identification number assigned by the board at the time of the administration. This number is essential for the Interstate Reporting Service to access candidate scores for registration and transfer. A candidate who does not remember his/her identification number can obtain it from the board in the state or province in which the VTNE was taken. PES *cannot* release this information to the candidates.

Applications for the Interstate Reporting Service are distributed at the time of the examination, or may be obtained from the Professional Examination Service, 475 Riverside Drive, 6th Floor, New York, New York 10115-0089. The telephone number for all score transfer requests is (212) 367-4339. Please leave a daytime telephone number if you receive voice-mail.

Applications for the Interstate Reporting Service are distributed at the test sites at the time of the examination, or may be obtained from:

**Professional Examination Service
Interstate Reporting Service (021)
475 Riverside Drive, 6th Floor
New York, NY 10115-0089**

Payments for these services must be made by either **certified check, money order, credit card (Mastercard or Visa ONLY)**, made payable to the Professional Examination Service. The sending of uncertified personal checks or cash will **not be accepted** as the method of payment.

HOW CAN CANDIDATES PREPARE TO TAKE THE EXAMINATION?

Candidates may wish to review the major areas to be tested. No current study guides or preparatory materials other than this brochure are promoted by PES and the VTTC. PES does not distribute past examinations for reasons of test security. 48 Sample Questions are presented in Appendix B.

APPENDIX A

List of Veterinary Technician Practice Domains and Task Statements

VTNE PRACTICE DOMAINS		
Domains	% of Items	# of Items
Domain 1. Pharmacy & Pharmacology	14	28
Domain 2. Surgical Prep. & Assisting	20	40
Domain 3. Dentistry Procedures	7	14
Domain 4. Laboratory Procedures	16	32
Domain 5. Animal Nursing	20	40
Domain 6. Radiography, Ultrasound, & etc.	8	16
Domain 7. Anesthesia	15	30

(Task statements appear on the pages that follow)

Appendix A (continued)

PRACTICE DOMAINS AND TASK STATEMENTS FOR THE VETERINARY TECHNICIAN NATIONAL EXAMINATION (VTNE)

DOMAIN 10. Pharmacy & Pharmacology

TASK 10.01

Prepare and/or dispense pharmacological and biological agents for subsequent administration to comply with veterinary prescriptions through dosage calculations, inventory control procedures, and recognition of drug classifications and understanding potential adverse or toxic side effects.

TASK 10.02

Instruct the client with regard to the administration side effects, normal and abnormal responses and use of dispensed medication to ensure the safety of the patient/client and efficacy of the product.

DOMAIN 20. Surgical Preparation and Assisting

TASK 20.01

Prepare and maintain the surgical suite environment (pre, intra, and post-operatively) by assembling the instrumentation and supplies through identification, packaging, sterilization, and sanitation procedures of instruments and facilities and patients in order to ensure an aseptic environment for both patient and personnel safety.

TASK 20.02

Participate as a sterile surgical technician by demonstrating a knowledge of instrument identification and usage, aseptic techniques (patient/personnel, tissue handling and suturing techniques, use of surgical accessory equipment), and by demonstrating a complete understanding of animal anatomy involved in common operative procedures in order to ensure patient safety and procedural efficiency.

TASK 20.03

Participate as a non-sterile surgical technician/assistant by demonstrating a knowledge of instrument identification and usage, aseptic techniques (patient/personnel and use of surgical accessory equipment), and by demonstrating a complete knowledge of animal anatomy involved in common operative procedures in order to ensure patient safety and procedural efficiency.

DOMAIN 30. Dentistry Procedures

TASK 30.01

Prepare and maintain the environment for dental procedures by assembling the instrumentation and supplies through identification, packaging, and sterilization, and sanitation procedures.

TASK 30.02

Perform proper prophylactic dental techniques in order to maintain the dental health of the patient and aid in the treatment of dental disease process. Correctly chart all findings of oral cavity. Discuss and demonstrate home dental care.

DOMAIN 40. Laboratory Procedures

TASK 40.01

Collect and prepare specimens for diagnostic evaluation.

TASK 40.02

Perform diagnostic tests and procedures on collected samples and specimens for determination of the animal's health status.

TASK 40.03

Maintain laboratory equipment and related supplies in order to ensure safety of operation and quality of results.

DOMAIN 50. Animal Nursing

TASK 50.01

Perform basic nursing skills as required for the health and safety of animals through restraint, administration of medications, triage, patient monitoring, preventive health maintenance, post-op and implementation of dietary management.

TASK 50.02

Instruct clients and prepare client communication materials concerning the home care required in order to promote and maintain the health of the patient and the safety of the client.

DOMAIN 60. Radiology and Ultrasound, and other electronic Imaging

TASK 60.01

Produce diagnostic radiographs and other electronic images for interpretation by the veterinarian through acceptable safety protocols, patient positioning, exposure techniques, and specialized procedures.

TASK 60.02

Maintain radiography equipment and related materials in order to ensure safety of operation and quality of results.

DOMAIN 70. Anesthesia

TASK 70.01

Select, administer, monitor, and maintain anesthesia (topical, local, regional and general) on the veterinary patient to facilitate pain-free diagnostic, treatment, or surgical procedures.

TASK 70.02

Maintain anesthetic equipment and related materials in order to ensure safety of operation and quality of results.

APPENDIX B

SAMPLE PROBLEMS

Following are fifty objective multiple-choice questions similar to those that may appear on the actual Veterinary Technician National Examination:

1. Phenothiazine tranquilizers are *contradicted* in an animal with:
 1. diabetes
 2. epilepsy.
 3. glaucoma.
 4. hyperthyroidism.

2. In canines and felines, all deciduous teeth are normally shed by:
 1. 2-3 months of age
 2. 4-5 months of age
 3. 6-8 months of age
 4. 9-12 months of age

3. An osteosarcoma is a:
 1. benign tumor originating in cartilage
 2. benign tumor originating in bone
 3. malignant tumor originating in bone
 4. malignant tumor originating in cartilage

4. Urine filtration occurs in which portion of the nephron?
 1. Proximal tubule
 2. Glomerulus
 3. Collecting tubule
 4. Distal tubule

5. In the bitch, total cornification of the epithelial cells on a vaginal smear indicates:
 1. anestrus
 2. metestrus
 3. estrus
 4. proestrus

6. A lowered prothrombin level can be caused by a dietary deficiency, by impaired synthesis, or by impaired absorption of vitamin:
1. A
 2. D
 3. E
 4. K
7. A veterinarian treated a cow for milk fever last evening, but this morning the owner calls and informs the technician that the cow is down again. The veterinarian is too sick to work today. The technician should:
1. go to the farm and treat the cow, since the condition was previously diagnosed.
 2. supply medication for the owner to administer to the cow.
 3. obtain authorization from the veterinarian to go to the farm and treat the cow.
 4. inform the owner that the veterinarian is sick and offer to try to obtain a referral.
8. A correct statement regarding halothane and methoxyflurane is that these anesthetics:
1. cross the placenta very slowly.
 2. have no affect on the fetus.
 3. do not cross the placenta.
 4. cross the placenta rapidly.
9. A correct statement regarding a Gram stain is that such a stain is a :
1. specific analysis on specific morphology.
 2. chromatic differential test of microorganisms.
 3. test used to differentiate viability.
 4. differential test of colony characteristics.

10. Which of the following is the best reversible agent for inducing anesthesia in sight hounds?
1. Pentobarbital
 2. Oxymorphone
 3. Phenobarbital
 4. Pentothal
11. Which of the following tissues is *most* radiation-sensitive?
1. Bone cortex
 2. Cartilage
 3. Muscle
 4. Bone marrow
12. Which of the following is an example of a water-soluble vitamin?
1. Vitamin A
 2. Vitamin B₂
 3. Vitamin E
 4. Vitamin K
13. When used as a preanesthetic, atropine will:
1. provide sufficient anesthesia for minor surgery.
 2. frequently produce vomiting.
 3. inhibit excessive salivary secretion.
 4. cause the pupils to constrict.
14. The spirochete *Borrelia burgdorferi* is responsible for which of the following diseases?
1. Distemper
 2. Pinkeye
 3. Lyme
 4. Panleukopenia
15. The soda lime in inhalation anesthesia equipment is used to absorb:
1. nitrous oxide.
 2. nitrogen.
 3. carbon dioxide.
 4. the anesthetic.

16. From cranial to caudal, the correct order for the segments of the spine in animals is:
1. coccygeal, sacral, lumbar, thoracic, cervical
 2. cervical, sacral, lumbar, thoracic, coccygeal
 3. cervical, thoracic, lumbar, sacral, coccygeal
 4. coccygeal, thoracic, lumbar, sacral, cervical
17. The Coggins test is used to diagnose:
1. listeriosis.
 2. equine encephalomyelitis.
 3. equine infectious anemia.
 4. brucellosis.
18. A disinfectant that should be used with caution around cats is:
1. Zephiran.
 2. phenol.
 3. Nolvasan.
 4. alcohol.
19. An emasculator is used in:
1. orthopedics.
 2. dentistry.
 3. cardiology.
 4. castration.
20. A correct statement regarding an onychectomy is that it involves the:
1. excision of a cyst.
 2. amputation of the tail.
 3. surgical removal of the nail.
 4. excision of the testicles.
21. A correct statement about the proper storage of whole blood is that it:
1. can be frozen for up to 1 year.
 2. can be stored at 39.2 F - 50 F (4 C - 10 C) for up to 3 weeks.
 3. should be stored above 122 F (50 C).
 4. does not need refrigeration for the first week of storage.

22. In which of the following types of fracture would skin be torn, and bone and subcutaneous tissue be exposed?
1. Impacted
 2. Greenstick
 3. Compound
 4. Comminuted
23. When using a dip on a dog to treat mange, you *must*:
1. rinse the dog thoroughly following application of the dip solution.
 2. place protective ointment in the dog's eyes first.
 3. be sure that the dog has not been bathed for at least 1 week.
 4. be careful that no dip solution wets the dog's face.
24. An otoscope is an instrument primarily used for examining the:
1. rectum.
 2. throat.
 3. ears.
 4. eyes.
25. Which of the following dog breeds is classified as brachycephalic?
1. Doberman pinscher
 2. Springer spaniel
 3. Chihuahua
 4. Pekingese
26. Which patient information should be included on the laboratory request form when ordering a blood culture?
1. Has taken monthly heartworm preventative for 1 year
 2. Has a 3-year history of a chronic skin disease
 3. Consumed a large meal 8 hours before the specimen was taken
 4. Received penicillin 12 hours before the specimen was taken

27. The *most important* reason for polishing the teeth after ultrasonic scaling is to:
1. prevent halitosis.
 2. improve the appearance of the teeth.
 3. create smooth surfaces to prevent accumulation
 4. facilitate fluoride application for prevention of dental caries.
28. The parasite *Anaplasma marginale* invades the:
1. white blood cells in cattle.
 2. red blood cells in horses.
 3. white blood cells in horses.
 4. red blood cells in cattle.
29. A general-purpose stain, such as new methylene blue is useful for:
1. determining the biochemical characteristics of an organism.
 2. studying the morphology of an organism.
 3. testing an organism's affinity for a stain.
 4. identifying Gram-positive organisms.
30. Unused media intended for microbiology purposes should be stored:
1. in the refrigerator.
 2. in the freezer.
 3. at room temperature.
 4. at body temperature.
31. *Eimeria stiedai* is associated with:
1. hepatic coccidiosis in rabbits.
 2. cecal coccidiosis in chickens.
 3. renal coccidiosis in geese.
 4. intestinal coccidiosis in dogs.
32. The type of wound healing in which granulation tissue forms, filling the defect, is known as:
1. first intention
 2. second intention
 3. third intention
 4. fourth intention

33. A dog that weighs 30 lb (13.6 kg) has had medication prescribed at a dosage of 0.01 mg/lb (0.022 mg/kg). The medication is available only in tablets that contain 0.3 mg each. For one dose, how many tablets should the dog receive?
1. $\frac{1}{4}$
 2. $\frac{1}{2}$
 3. 1
 4. $1\frac{1}{2}$
34. In cases of organophosphate poisoning, which of the following is a commonly used antagonist?
1. Dexamethasone
 2. Disophenol
 3. Doxapram
 4. Atropine
35. The penetrating power of an X ray is controlled by the:
1. kilovoltage.
 2. low-energy transformer.
 3. milliamperere-seconds.
 4. milliamperage.
36. A correct statement regarding doxapram hydrochloride (Dopram-V) is that it is a:
1. local anesthetic.
 2. narcotic antagonist.
 3. cardiac depressant.
 4. respiratory stimulant.
37. Which of the following parasites is *most likely* to cause eye damage to a human who becomes infected?
1. A *Toxocara canis* larva
 2. A *Sarcoptes scabiei* mite
 3. An *Ancylostoma caninum* larva
 4. A *Cheyletiella parasitivorax* mite

38. When the albumin value is subtracted from the total protein value, the remainder represents the concentration of:
1. bilirubin.
 2. phosphorus.
 3. globulin.
 4. glucose.
39. Which of the following is a respiratory stimulant?
1. Naloxone
 2. Sodium bicarbonate
 3. Xylazine
 4. Doxapram
40. Anticholinergic drugs *decrease* all of the following *except*:
1. gastrointestinal motility.
 2. salivation.
 3. pain.
 4. vagus-induced bradycardia.
41. Which of the following methods would be an initial measure in providing first aid for epistaxis?
1. Application of ice packs to the nasal passages
 2. Injection with vitamin K
 3. Administration of a tranquilizer
 4. Application of a pressure bandage to the affected area
42. Treatment instructions on a hospitalized dog read: "Administer chloramphenicol 500 mg b.i.d. per os." To comply with these instructions, the treatment is correctly interpreted as:
1. 250 mg twice a day by mouth.
 2. 250 mg three times a day in food.
 3. 500 mg three times a day in food.
 4. 500 mg twice a day by mouth.
43. If an error is made on a medical record, the proper method for correcting the mistake is to:
1. white it out with correction fluid.
 2. draw a single line through it and initial the correction.
 3. erase it.
 4. scratch it out so it cannot be read.

44. Which of the following is commonly used for infiltration and epidural anesthesia?
1. Proparacaine
 2. Lidocaine
 3. Pentobarbital
 4. Sodium pentothal
45. A bovine can be made recumbent by exerting pressure on muscles and nerves with a series of carefully placed and tightened ropes. This technique is called:
1. tilting squeeze.
 2. casting.
 3. haltering.
 4. hobbling.
46. A correct statement concerning guinea pigs is that they are:
1. carnivorous.
 2. unable to synthesize sufficient vitamin C.
 3. mature at birth.
 4. strictly monogamous.
47. A radiograph that has been developed with exhausted chemicals and increased developing time will have:
1. good contrast, with a dark gray background.
 2. poor contrast, with a black background.
 3. good contrast, with a black background.
 4. poor contrast, with a dark gray background.
48. The laboratory animal that is *most likely* to have an epileptiform fit when handled is the:
1. gerbil.
 2. guinea pig.
 3. hamster.
 4. mouse.

Answer Keys

1.	2	11.	4	21.	2	31.	1	41.	1
2.	3	12.	2	22.	3	32.	2	42.	4
3.	3	13.	3	23.	2	33.	3	43.	2
4.	2	14.	3	24.	3	34.	4	44.	2
5.	3	15.	3	25.	4	35.	1	45.	2
6.	4	16.	3	26.	4	36.	4	46.	2
7.	4	17.	3	27.	3	37.	1	47.	4
8.	4	18.	2	28.	4	38.	3	48.	1
9.	2	19.	4	29.	2	39.	4		
10.	2	20.	3	30.	1	40.	3		