

## 2023 Veterinary Technician National Examination Content Outline

| Domain                                                         | # Items    | %           |
|----------------------------------------------------------------|------------|-------------|
| 1. Pharmacy and Pharmacology                                   | 20         | 13%         |
| 2. Surgical Nursing                                            | 20         | 13%         |
| 3. Dentistry                                                   | 10         | 7%          |
| 4. Laboratory Procedures                                       | 14         | 9%          |
| 5. Animal Care and Nursing                                     | 30         | 20%         |
| 6. Diagnostic Imaging                                          | 9          | 6%          |
| 7. Anesthesia                                                  | 20         | 13%         |
| 8. Emergency Medicine/Critical Care                            | 10         | 7%          |
| 9. Pain Management/Analgesia                                   | 10         | 7%          |
| 10. Communication and Veterinary Professional Support Services | 7          | 5%          |
| <b>Total</b>                                                   | <b>150</b> | <b>100%</b> |

### Task Statements

|          |                                                                                                                                                    |           |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>Pharmacy and Pharmacology</b>                                                                                                                   | <b>20</b> |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to the use of pharmacological, chemical, and biological agents.        |           |
| B        | Prepare medications in compliance with veterinarian's orders.                                                                                      |           |
| C        | Calculate medications, fluid therapy rate, and continuous rate infusions based on the appropriate dosage in compliance with veterinarian's orders. |           |
| D        | Dispense medications in compliance with veterinary orders.                                                                                         |           |
| E        | Maintain controlled drug inventory, related logbooks, and medical records.                                                                         |           |
| F        | Recognize classifications of drugs, their mechanisms, and clinically relevant side effects.                                                        |           |
| G        | Store, handle, and safely dispose of pharmacological, chemical, and biological agents.                                                             |           |
| <b>2</b> | <b>Surgical Nursing</b>                                                                                                                            | <b>20</b> |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to surgical nursing.                                                   |           |
| B        | Prepare the surgical environment, equipment, instruments, and supplies to meet the needs of the surgical team and patient.                         |           |
| C        | Prepare patient for surgical procedure.                                                                                                            |           |
| D        | Function as a sterile surgical technician to ensure patient safety and procedural efficiency.                                                      |           |
| E        | Function as a circulating (non-sterile) surgical technician to ensure patient safety and procedural efficiency.                                    |           |

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| F        | Clean instruments by the appropriate method (including but not limited to manual, soak, or ultrasonic).                                                                                             |           |
| G        | Maintain aseptic conditions in surgical suite and during surgical procedures.                                                                                                                       |           |
| H        | Maintain the surgical environment, equipment, instruments, and supplies to meet the needs of the surgical team and patient.                                                                         |           |
| I        | Sterilize equipment and supplies by the appropriate method (including but not limited to steam, gas).                                                                                               |           |
| <b>3</b> | <b>Dentistry</b>                                                                                                                                                                                    | <b>10</b> |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to dentistry.                                                                                                           |           |
| B        | Prepare and maintain the environment, equipment, instruments, and supplies to meet the needs of the dental team and patient.                                                                        |           |
| C        | Perform Comprehensive Oral Health Assessment and Treatment (COHAT) (including but not limited to scaling and polishing; manual and machine).                                                        |           |
| D        | Produce diagnostic dental radiographs.                                                                                                                                                              |           |
| <b>4</b> | <b>Laboratory Procedures</b>                                                                                                                                                                        | <b>14</b> |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to laboratory procedures.                                                                                               |           |
| B        | Prepare and maintain specimens and documentation for in-house or outside laboratory evaluation.                                                                                                     |           |
| C        | Perform laboratory tests and procedures (including but not limited to microbiology, serology, cytology, hematology, urinalysis, and parasitology).                                                  |           |
| D        | Maintain laboratory equipment and related supplies to ensure safety and quality of results.                                                                                                         |           |
| <b>5</b> | <b>Animal Care and Nursing</b>                                                                                                                                                                      | <b>30</b> |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to patient care and nursing.                                                                                            |           |
| B        | Document and manage initial and ongoing evaluations of patient to provide optimal care (including but not limited to physical, behavioral, nutritional, clinical procedures, and mentation status). |           |
| C        | Perform nursing procedures and maintenance of prescribed treatments (including but not limited to catheterization, wound management, and bandaging).                                                |           |
| D        | Perform clinical procedures to aid in diagnosis and prognosis (including but not limited to blood pressure measurement, electrocardiography, and tonometry).                                        |           |
| E        | Provide a safe, sanitary, and comfortable environment for patient to ensure optimal healthcare and client/personnel safety.                                                                         |           |
| F        | Maintain diagnostic equipment and related supplies to ensure safety and quality of results.                                                                                                         |           |
| G        | Administer medications via the appropriate routes (including but not limited to topical, intravenous, subcutaneous).                                                                                |           |

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| H        | Collect specimens for in-house or outside laboratory evaluation.                                                                                               |           |
| I        | Recognize and respond to behavioral characteristics of patient.                                                                                                |           |
| J        | Restrain patient with or without equipment for treatment following safety protocols.                                                                           |           |
| <b>6</b> | <b>Diagnostic Imaging</b>                                                                                                                                      | <b>9</b>  |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to diagnostic images.                                                              |           |
| B        | Produce and document diagnostic images and/or radiographs (excluding dental) following protocols for safety and quality of results.                            |           |
| C        | Maintain imaging/radiograph equipment and related materials to ensure safety and quality of results.                                                           |           |
| <b>7</b> | <b>Anesthesia</b>                                                                                                                                              | <b>20</b> |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to anesthesia.                                                                     |           |
| B        | Assist in the development and implementation of an anesthetic plan to ensure patient safety and procedural efficacy.                                           |           |
| C        | Prepare anesthetic equipment and related supplies to ensure operator and patient safety.                                                                       |           |
| D        | Maintain anesthetic equipment and related materials to ensure reliable operation.                                                                              |           |
| E        | Establish and maintain a patent airway using endotracheal intubation.                                                                                          |           |
| F        | Monitor and respond to patient status during all stages of anesthesia (pre-, peri-, and post-).                                                                |           |
| <b>8</b> | <b>Emergency Medicine/Critical Care</b>                                                                                                                        | <b>10</b> |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to emergency medicine and critical care.                                           |           |
| B        | Perform triage of a patient presenting with emergency/critical conditions (including but not limited to shock, acute illness, acute trauma, and toxicity).     |           |
| C        | Perform emergency nursing procedures (including but not limited to cardiopulmonary resuscitation (CPR), control acute blood loss, and fracture stabilization). |           |
| D        | Perform critical care nursing procedures (including but not limited to blood component therapy, fluid resuscitation, and ongoing oxygen therapy).              |           |
| E        | Perform ongoing evaluations of physical, behavioral, nutritional, and mentation status of patient in emergency and critical conditions.                        |           |
| <b>9</b> | <b>Pain Management/Analgesia</b>                                                                                                                               | <b>10</b> |
| A        | Utilize knowledge of anatomy, physiology, and pathophysiology as it applies to pain management and analgesia.                                                  |           |
| B        | Recognize need for analgesia in patient.                                                                                                                       |           |
| C        | Assist in the development and implementation of the pain management plan to optimize patient comfort and/or healing.                                           |           |

| 10           | Communication and Veterinary Professional Support Services                                                                                                                                                                                                                                                                                                              | 7          |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| A            | Educate the client about animal care, risks, and side effects to promote and maintain the health of animals and the safety of client/public (including but not limited to behavior, nutrition, pharmacological/biological/chemical agents, dental health, anesthetic procedures, pain assessment/management, pre- and post-operative care, preventative care, zoonosis) |            |
| B            | Maintain professional communication in all client and veterinary team interactions.                                                                                                                                                                                                                                                                                     |            |
| C            | Collect patient information (including but not limited to signalment, medical history, primary complaint).                                                                                                                                                                                                                                                              |            |
| D            | Provide assistance with the euthanasia process (including but not limited to consent, aftercare, grief management).                                                                                                                                                                                                                                                     |            |
| <b>Total</b> |                                                                                                                                                                                                                                                                                                                                                                         | <b>150</b> |

### Knowledge Statements

|    | Knowledge Statement                                                                                                                                            |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Anatomy                                                                                                                                                        |
| 2  | Normal physiology                                                                                                                                              |
| 3  | Pathophysiology                                                                                                                                                |
| 4  | Common animal diseases                                                                                                                                         |
| 5  | Medical terminology                                                                                                                                            |
| 6  | Toxicology                                                                                                                                                     |
| 7  | Applied mathematics (including but not limited to metric system/weights, measures/percentage solutions, dosage calculations)                                   |
| 8  | Drug classification                                                                                                                                            |
| 9  | Routes of administration of pharmacological, chemical, and biological agents                                                                                   |
| 10 | Legal requirements and procedures for acquiring, preparing, storing, dispensing, documenting and disposing of pharmacological, chemical, and biological agents |
| 11 | Safe handling practices for pharmacological, chemical, and biological agents.                                                                                  |
| 12 | Pharmacokinetics (drug absorption, metabolism, excretion), normal and abnormal drug reactions, indications, contraindications, side effects, and interactions  |
| 13 | Fluid balance and therapy, including calculation                                                                                                               |
| 14 | Aseptic techniques                                                                                                                                             |
| 15 | Patient preparation and positioning techniques (including but not limited to diagnostic imaging, surgery, medical procedures)                                  |
| 16 | Surgical procedures                                                                                                                                            |
| 17 | Surgical equipment, instruments, and supplies                                                                                                                  |
| 18 | Sterilization techniques and quality assurance for equipment, instruments, and supplies                                                                        |
| 19 | Safety considerations related to surgical equipment, instruments, and supplies                                                                                 |

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| 20 | Wound closure (including but not limited to suture materials and patterns, staples, and tissue adhesives)                                                                                                    |
| 21 | Dental procedures (including but not limited to cleaning, floating, charting, preventive procedures, dental imaging)                                                                                         |
| 22 | Dental equipment, instruments, and supplies                                                                                                                                                                  |
| 23 | Safety considerations related to dental procedures                                                                                                                                                           |
| 24 | Sample collection, preparation, analysis, storing, and shipping techniques                                                                                                                                   |
| 25 | Laboratory diagnostic principles, procedures, and methodologies (including but not limited to microbiology, serology, cytology, hematology, urinalysis, and parasitology)                                    |
| 26 | Quality assurance in the laboratory (including but not limited to maintenance of equipment, verification of test results, calibration, and controls)                                                         |
| 27 | Normal and abnormal laboratory and diagnostic test results                                                                                                                                                   |
| 28 | Animal assessment and monitoring techniques, excluding anesthetic monitoring                                                                                                                                 |
| 29 | Principles of animal behavior                                                                                                                                                                                |
| 30 | Clinical diagnostic procedures                                                                                                                                                                               |
| 31 | Nutrition                                                                                                                                                                                                    |
| 32 | Safe animal handling and restraint techniques                                                                                                                                                                |
| 33 | Animal husbandry                                                                                                                                                                                             |
| 34 | Animal nursing procedures and rehabilitation therapies                                                                                                                                                       |
| 35 | Animal first aid, triage, and emergency/critical care techniques                                                                                                                                             |
| 36 | Public health (including but not limited to infection control, zoonosis and epidemiology)                                                                                                                    |
| 37 | Environmental health and safety procedures (including but not limited to handling and disposing of hazardous material, personal safety, evacuation procedures, safety plans, equipment, and instrumentation) |
| 38 | Disease control and prevention techniques (including but not limited to quarantine, isolation, vaccination, wellness care, and herd health)                                                                  |
| 39 | Diagnostic imaging equipment and procedures (including but not limited to radiography, ultrasonography, and contrast studies)                                                                                |
| 40 | Quality assurance and safety for diagnostic imaging                                                                                                                                                          |
| 41 | Pre- and post-anesthetic assessment and care                                                                                                                                                                 |
| 42 | Anesthetic induction, maintenance, monitoring, and recovery including stages of anesthesia and troubleshooting                                                                                               |
| 43 | Pre-anesthetic and anesthetic medications reactions, indications, contraindications, side effects, and interactions                                                                                          |
| 44 | Pain assessment and analgesic administration techniques                                                                                                                                                      |
| 45 | Procedures for care, maintenance, and use of diagnostic, therapeutic, surgical, dental, monitoring, and anesthetic equipment and supplies                                                                    |
| 46 | Professional ethics (including but not limited to the Veterinary Technician Code of Ethics)                                                                                                                  |
| 47 | Techniques for communicating with the veterinary medical team and client                                                                                                                                     |



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|----|-----------------------------------------------------------------------------------------------|
| 48 | Record keeping                                                                                |
| 49 | Signs of suspected animal abuse (including but not limited to physical and emotional trauma). |
| 50 | Crisis intervention skills                                                                    |