

Academy of Veterinary Nutrition Technicians Advanced Knowledge List



All qualified candidates will have demonstrated advance veterinary technician nutrition knowledge. All VTS (Nutrition) candidates shall demonstrate advanced knowledge and expertise in the area of veterinary nutrition.

Applicants Name:

The applicant is required to demonstrate advanced knowledge of veterinary nutrition. The AVNT recommends utilizing the attached list as a guide, but acknowledges this list may not be all-inclusive.

	Advanced Knowledge List	Supervising Veterinarian or VTS Signature	Date
Nutrients			
1	Identify the 6 classes of nutrients in mammals.		
2	Identify the kcal factors for each class of nutrients.		
3	List the essential amino acids in dogs and cats.		
4	List the non-essential amino acids in dogs and cats.		
5	Understand protein digestion in dogs and cats.		
6	Understand fat digestion in dogs and cats.		
7	Understand carbohydrate digestion in dogs and cats.		

8	Understand carbohydrate classes and effects: insoluble, moderately soluble, and soluble.		
9	Understand mineral functions and the effects of excesses and deficiencies.		
10	Understand vitamin functions and the effects of excesses and deficiencies.		
11	Identify the 2 types of antioxidants, list examples, and their functions.		
12	Understand essential fatty acids, list examples, and their functions.		
Guidelines, Regulations, and Manufacturing			
13	Identify the regulatory bodies in the pet food industry for your country.		
14	Who is AAFCO and what do they do?		
15	What are the three nutritional adequacy statements that can be found on a pet food and what do they mean?		
16	What is required for a diet to be listed as "all life stages"?		
17	Explain what it entails for an AAFCO feeding test for adult maintenance, growth (including guideline for large dogs) and gestation lactation.		
18	Be able to recognize a correctly stated AAFCO Nutritional Adequacy Statement.		

19	What are the AAFCO food label guidelines?		
20	List the required parts of a pet food label. Understand how to read a pet food label.		
21	Understand the definition of commonly used AAFCO feed definitions (examples: by-products, meal, flavor, meat, etc).		
22	List the regulatory bodies for animal feed in the United States and their responsibilities.		
23	What is digestibility?		
24	How is digestibility determined?		
25	Be familiar with methods used to access nutritional information on OTC and prescription diets.		
26	Define Maillard product and describe it's role in digestibility.		
27	Be familiar with the manufacturing process for both kibble and canned products.		
28	Recognize what the Guaranteed Analysis represents, its benefits and limitations.		
29	Be familiar with the World Small Animal Veterinary Association.		
Key Nutritional Factors			
30	List and understand the key nutritional factors for an omnivore.		
31	List and understand the key nutritional factors for a carnivore.		
32	List and understand the key nutritional factors for a herbivore.		
33	List and understand the key nutritional factors unique for cats.		

34	List and understand the key nutritional requirements during reproduction and lactation of cats and dogs.		
35	List and understand the key nutritional requirements during growth for cats and dogs.		
36	Explain the nutrients of concern and why this is necessary for large breed puppy growth.		
37	List and understand the key nutritional factors for adult cats and dogs.		
38	List and understand the key nutritional factors for senior cats and dogs.		
39	List and understand the key nutritional factors for weight loss in cats and dogs.		
40	List and understand the key nutritional factors for renal disease in cats and dogs.		
41	List and understand the key nutritional factors for diabetic cats and dogs.		
42	List and understand the key nutritional factors for cancer in cats and dogs.		
43	List and understand the key nutritional factors for adverse food reactions in cats and dogs.		
44	List and understand the key nutritional factors for osteoarthritis in cats and dogs.		
45	List and understand the key nutritional factors for common urolithiasis / FLUTD in cats and dogs.		
46	List and understand the key nutritional factors for gastritis in cats and dogs.		

47	List and understand the key nutritional factors for intestinal disease in cats and dogs.		
48	List and understand the key nutritional factors for constipation and obstipation in cats and dogs.		
49	List and understand the key nutritional factors for megacolon in cats.		
50	List and understand the key nutritional factors for cardiac disease in cats and dogs.		
51	List and understand the key nutritional factors for hepatic diseases in cats and dogs.		
52	Explain the nutrients of concern and why this is necessary in hepatic lipidosis		
53	List and understand the key nutritional factors for pancreatitis in cats and dogs.		
54	List and understand the key nutritional factors and feeding techniques for megaesophagus in dogs.		
55	List and understand the key nutritional factors unique to equines.		
56	List and understand the key nutritional factors unique to avians.		
57	List and understand key nutritional factors unique to ruminants.		
58	List and understand key nutritional factors unique to reptiles.		
Nutrition Calculations, Diets, and Feeding Techniques			
59	Understand methods to calculate energy requirements for cats and dogs.		

60	Calculate feeding amounts based on energy requirements.		
61	List factors that impact caloric requirements.		
62	Calculate a comprehensive weight loss plan for a dog or cat with a BCS 9/9.		
63	Describe "coax feeding" and list different techniques.		
64	Describe signs of food aversion.		
65	Describe signs of nausea related to feeding.		
66	Describe assisted feeding techniques, and their pros and cons for each technique.		
67	List the appropriate food types for different assisted feeding techniques.		
68	Understand what TPN (or CPM) is, indications for use, complications associated with, along with how to calculate the dose of nutrients required.		
69	Understand the osmolarity of IV fluids and parenteral nutrition solutions and the appropriate routes of administration.		
70	Understand what PPN is, indications for use, complications associated with, and how to calculate the dose of nutrients required.		
71	Calculate parenteral requirements.		
72	List and discuss health and associated problems with non-veterinary developed treats (chocolate, onions, cherry seeds, high fat treats, etc.).		

73	Know what percentage of calories can come from treats/food alternatives that will not create an unbalanced diet.		
74	Benefits and detriments to homemade diets.		
75	Evaluate homemade diets for potential risks.		
76	Benefits and detriments to vegetarian diets in cats and dogs.		
77	Benefits and detriments to vegan diets in cats and dogs.		
78	Benefits and detriments to raw food diets in cats and dogs.		
79	Describe proper handling, and cleaning techniques for owners feeding homemade or raw diets.		
Anatomy, Physiology and Assessment			
80	Understand anatomy and physiology for the GI tract in cats and dogs.		
81	Describe Refeeding syndrome - how to avoid, recognize and treat this condition.		
82	Assess hospitalized and outpatient animals for nutritional risk status.		
83	Understand how nutrition can affect a patient experiencing a metabolic and/or electrolyte imbalance.		
84	Recognize physical and laboratory signs of nutritional deficiency.		
85	Define malnourishment.		

86	Evaluate a scientific paper for options that may have affected the outcome.		
87	Evaluate a bag of pet food that you are unfamiliar with including the label and advertising claims for the nutrients.		
88	Appropriately discuss and guide owners through "fad" diet trends (BARF, Grain-free, Ketogenic, Vegan).		
89	Understand differences some in Endocrine disorders - thyroid, diabetes mellitus.		