American College of Veterinary Internal Medicine (ACVIM)
Nutrition Specialty Exam
Test Specifications

I. Multiple-Choice Section

A. Nutritional Biochemistry and Requirements	**30%**
1. Demonstrate knowledge of definitions, classifications, metabolism, functions, and interactions of the following nutrients:	
a. Carbohydrates including fiber	
b. Lipids	
c. Proteins and other nitrogen-containing compounds	
d. Vitamins, vitamin-like, and other functional compounds	
e. Minerals	
f. Water	
2. Demonstrate knowledge of energy and energetics including measurement methods	
3. Demonstrate knowledge of nutritional aspects of acid-base regulation	
4. Demonstrate knowledge of comparative aspects of nutritional biochemistry and requirements	
5. Describe the derivation and application of nutritional requirements, including but not limited to:	
a. Minimal vs. adequate vs. recommended vs. safe upper limits/maximum tolerable level vs. toxic	
b. Allometry	
6. Demonstrate knowledge of intake for an animal and its relationship to nutrient requirements, such as:	
a. Bioavailability	
B. Nutritional Physiology and Pathophysiology	**20%**
1. Demonstrate knowledge of physiology	
a. Alimentary/Digestive	
b. Endocrine	

c. Metabolic
d. Urinary and Renal
e. Immunologic
f. Cardiorespiratory
g. Musculoskeletal
h. Neoplastic
i. Pancreatic
j. Hepatic
k. Dermatological
l. Neurological/Cognitive
2. Demonstrate knowledge of nutrient-gene interactions, including but not limited to:
a. Epigenetics
b. Breed differences
3. Demonstrate knowledge of age-, life stage-, sex-, breed- or species-related nutritional physiology and pathophysiology
4. Demonstrate knowledge of the prevention and pathophysiology of diet-induced and nutrient sensitive diseases
5. Demonstrate knowledge of the regulation of appetite and control of food intake
6. Demonstrate knowledge of the causes and consequences of altered body composition (e.g., cachexia, sarcopenia, obesity) and methods of assessment
7. Demonstrate knowledge of the pathophysiology of starvation and catabolic disease
8. Demonstrate knowledge of nutrient-drug interactions
C. Assessment of Individual/Group **10%**
1. Recognize age-, life stage-, sex-, breed- or species-related susceptibility to nutritional problems
2. Interpret body weight, body condition, muscle mass, and changes over time
3. Recognize physical signs and interpret laboratory results of diet-induced or nutrient sensitive conditions, including but not limited to:
a. Imaging
b. Clinical pathology tests
4. Identify candidate for assisted nutritional support
a. Enteral
b. Parenteral
5. Ability to evaluate status and nutritional considerations of the following life stages:
a. Maintenance

b. Growth (pre-weaning and post-weaning)
c. Reproduction
d. Production/Lactation
e. Working/Performance
6. Evaluate status and nutritional considerations for the following diseases/conditions (individually or in combination):
a. Gastrointestinal
b. Endocrine
c. Metabolic
d. Urinary and Renal
e. Cardiorespiratory
f. Musculoskeletal
g. Dental
h. Neoplastic
i. Pancreatic
j. Hepatic
k. Dermatological
l. Neurological/Cognitive
m. Obesity
n. Starvation
o. Critical illness (e.g., trauma, sepsis, peri-operative)
D. Dietary Assessment and Feeding Practice **12.5%**
1. Obtain accurate and complete diet/ration history, including treats, supplements, and foods for medication administration
2. Determine energy, dry matter, and nutrient intake
3. Assess adequacy of energy, dry matter, and nutrient intake relative to individual/group requirements
4. Evaluate non-nutritive feed additives and growth promotants
5. Describe nutritional implications of food/feed forms, including but not limited to:
a. Forage forms
b. Commercial feed types (large animal and small animal)
c. Homemade
6. Assess nutritional implications of environmental factors, including but not limited to:
a. Season/Climate

b. Feed competition
c. Stress
d. Enrichment
7. Develop a species appropriate plan to sample and analyze food/feed/water, including but not limited to:
a. Nutrient content
b. Contaminants
c. Forage analysis
8. Interpret the results of food/feed/water laboratory analyses and formulation software
a. Evaluate company provided information (e.g., feed/ingredient labels, website information, product guides)
b. Evaluate nutritional value of ingredients and effect of processing
9. Demonstrate knowledge of implications of and indications for specific feeding practices, including but not limited to:
a. Frequency
b. Location
10. Assess relative nutritional and economic value of feeding systems, such as:
a. Nutrition modeling
11. Recognize diet related toxicosis, including but not limited to:
a. Toxic plants
b. Contaminants
c. Nutrients
d. Microbial
E. Develop a Nutritional Plan for the Individual/Group 12.5%
1. Assess the animal's nutritional considerations compared to current diet/ration
2. Develop a prioritized nutritionally relevant problem list and differential diagnosis list
3. Develop a diagnostic plan and interpret results, including but not limited to:
a. Imaging
b. Clinical pathologic tests
4. Demonstrate knowledge of principles of ration/recipe formulation
5. Formulate an appropriate ration/recipe to meet specific considerations, including but not limited to:
a. Cost
b. Environmental sustainability

c. Ingredient restrictions	
d. Ingredient accessibility	
e. Palatability	
6. Incorporate assessment findings to develop a feeding plan (e.g., diet, treats, supplements, medications, amounts, feeding method) based on prioritization of needs	
7. Establish a monitoring program for individual/group	
8. Evaluate individual/group response to feeding plan and modify as needed	
9. Demonstrate knowledge of nutritional and pharmacological methods to manage animals with altered appetites	
10. Demonstrate knowledge of assisted feeding tube selection, placement technique, management, and potential complications, including specific dietary recommendations and fluid administration	
11. Demonstrate knowledge of catheter selection, formulation, institution, and monitoring of parenteral nutrition and fluid administration	
12. Describe characteristics of the components used in parenteral nutrition	
13. Communicate the feeding plan to relevant parties	
a. Provide rationale for the feeding plan	
b. Answer feeding plan questions	
c. Utilize techniques to increase client's adherence to feeding plan or nutritional recommendations	
d. Address misconceptions regarding nutrition, diets, and ingredients	
F. Food/Feed and Supplement Production, Safety, Regulation, and Research Methods	**15%**
1. Demonstrate knowledge of principles of manufacturing and food science, including but not limited to:	
a. Processing	
b. Quality control	
c. Safety	
d. Preservatives	
2. Demonstrate knowledge of the procurement and handling of ingredients as sources of nutrients, including but not limited to:	
a. Bioavailability	
b. Digestibility	
c. Storage/handling techniques	
d. Soil quality as determined by soil testing	
3. Demonstrate knowledge of sustainability and environmental implications of feeding practices	

4. Demonstrate knowledge of safe storage and analysis procedures for contamination
5. Demonstrate knowledge of regulations and labeling
6. Evaluate quality of nutritional information from various sources, including but not limited to:
a. Internet
b. Marketing claims
c. Scientific literature
d. Product guides
7. Evaluate study design and appropriate application of statistics/epidemiology
8. Demonstrate knowledge of food/feed analytical methods and their limitations
II. Essay Section
A. Assessment of Individual/Group **30%**
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B. Dietary Assessment and Feeding Practice **35%**
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8. Interpret the results of food/feed/water laboratory analyses and formulation software
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a. Frequency
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a. Toxic plants
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C. Develop a Nutritional Plan for the Individual/Group **35%**
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6. Incorporate assessment findings to develop a feeding plan (e.g., diet, treats, supplements, medications, amounts, feeding method) based on prioritization of needs
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