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

A. Normal Cardiovascular Anatomy	**5%**
1. Gross anatomy	
2. Ultrastructure (e.g., electron microscopy images)	
3. Embryology (e.g., fetal and neonatal development, associated physiology)	
B. Normal Cardiovascular Physiology	**5%**
1. The normal cardiac cycle (e.g., Wigger's diagram, pressure volume loops, species differences)	
2. Neurohormonal control of circulation and cardiac function	
3. Myocardial mechanics (e.g., diastolic and systolic function)	
4. Myocardial metabolism	
5. Electrophysiology (e.g., ion channels)	
6. Excitation-contraction coupling	
7. Fluid and electrolyte balance (e.g., RAAS)	
8. Pulmonary physiology	
9. Exercise physiology	
C. Diagnostic Studies	**25%**
1. Physical examination and phonocardiography	
2. Laboratory diagnosis (e.g., cardiac biomarkers, cytology)	
3. Surface ECG including ladder diagrams	
4. Ambulatory ECG	
5. Intracardiac (e.g., His-bundle recordings)	
6. Heart rate variability and signal average	
7. Radiography	
8. Echocardiography	
9. Advanced imaging (e.g., nuclear, CT, MRI, PET)	
10. Angiography	

11. Cardiac catheterization (e.g., pressure traces, PV loops, indicator dilution, cardiac output)
D. Pharmacologic and Non-pharmacologic Management of Cardiovascular Disease (includes mechanism of action, classification, side effects, indication, drug interactions) **12%**
1. Diuretics
2. Antiarrhythmics
3. Vasoactive drugs
4. Inotropes
5. Neurohormonal modulators
6. Nutraceuticals with cardiovascular effects
7. Modulators of coagulation
8. Anesthetics/sedatives with cardiovascular effects
9. Non-pharmacologic therapy (e.g., cardioversion, ablation, surgery)
E. Cardiovascular Pathophysiology **20%**
1. Heart failure
2. Cardiac toxicology (e.g., plant, medication, nutritional)
3. Syncope
4. Shock
5. Arrhythmogenesis
6. Genetics
7. Gross
8. Histological
9. Ultrastructure (e.g., electron microscopy images)
10. Embryology
11. Animal models of cardiac disease
12. Heart disease in the context of other systemic disease (e.g., systemic hypertension, endocrine, infectious, cardio-renal syndrome)
13. Pulmonary hypertension
F. Cardiovascular Disease **29%**
1. Congenital

2. Valvular	
3. Myocardial	
4. Pericardial	
5. Vascular (e.g., pulmonary hypertension, systemic hypertension, coronary arteries, ATE)	
6. Infectious (e.g., heartworm, Chagas)	
7. Neoplasia	
8. Arrhythmias/electrical disease	
G. Statistics and Research	**4%**
1. Biostatistics (e.g., study design, basic analysis)	
2. Peer reviewed literature interpretation and clinical application	