



## **SUBJECT CATEGORY STUDY OUTLINE**

### **I. Anatomy**

- A. Anatomy (gross, histological, ultrastructure)
- B. Embryology (fetal and neonatal development)
- C. Cardiovascular genetics

### **II. Physiology**

- A. The normal cardiac cycle
- B. Control of circulation including hormonal and autonomic
- C. Hemodynamics, including normal values and species differences
- D. Cardiovascular sounds
- E. Myocardial mechanics
- F. Metabolism of the myocardium and blood vessels
- G. Electrophysiology and excitation-contraction coupling
- H. Fluid and electrolyte balance
- I. Exercise physiology

### **III. Diagnostic Studies**

- A. Physical diagnosis
- B. Laboratory diagnosis including cytology
- C. Radiology
- D. Electrocardiography (normal and abnormal)
- E. Vectorcardiography
- F. Ambulatory electrocardiography
- G. Phonocardiography
- H. Electrophysiology, His-bundle recordings, etc.
- I. Echocardiography (M-mode, 2-D, Doppler, color-flow)
- J. Cardiac catheterization (all aspects)
- K. Angiocardiology
- L. Nuclear cardiology
- M. Miscellaneous special studies (flow volume, contrast study, etc)

### **IV. Pharmacology**

- A. Cardiotoxic drugs
- B. Antiarrhythmic drugs (different classes and actions)

- C. Vasoactive drugs
- D. Autonomic drugs
- E. Miscellaneous drugs

**V. Heart Disease**

- A. Heart failure—pathophysiology and treatment
- B. Syncope and shock
- C. Arrhythmias and conduction disturbances
- D. Antiarrhythmic therapy—cardioversion
- E. Congenital heart diseases
- F. Valvular heart diseases
- G. Myocardial disease
- H. Pericardial disease
- I. Endocardial disease
- J. Vascular disease
- K. Cor pulmonale/heartworm disease
- L. Cardiac pathology (gross, histologic, ultrastructure)
- M. Cardiac surgery
- N. Comparative cardiology
- O. Animal models of cardiac disease
- P. Heart disease secondary to other organ systems
- Q. Heart disease—miscellaneous