Chapter 22 Study Questions:

1. Name at least two advantages of nuclear image testing compared to echocardiography testing.

2. What do we mean by a "first pass" analysis test? What does it measure, ventricular function or ventricular perfusion?

3. What normally should happen to the ejection fraction, end-diastolic volume and end-systolic volume during exercise?

4. What do we mean by multiple gated blood pool imaging (MUGA)? What type of tracer and camera are frequently used?

5. What is tomography? Explain how it is used with MUGA imaging to identify specific regions of ischemia or altered ventricular function.

6. What is SPECT? (single photon emission computed tomography). How can it be used with MUGA imaging to increase the sensitivity of detecting sites of abnormal wall motion or ischemia?

7. Explain how thallium is used to detect regions of the heart that are ischemic. How is it used to separate ischemic regions from regions of scar tissue?

8. What other tracers besides thallium can be used to evaluate ventricular perfusion? Why must these tracers be injected near peak exercise in order to optimize the test sensitivity to detect CAD?

9. What types of <u>stressors</u> may be used with nuclear imaging to assess ventricular function or perfusion?

10. What is PET?