Which one of the following murmurs is a continues murmur:

(A) Aortic stenosis

(B) Patent ductus arteriosus

(C) Tricuspid regurgitation

23. Inspiration "splits" the second heart sound because

(A) the aortic valve closes before the pulmonic valve

(B) the pulmonic valve closes before the aortic valve

(C) the mitral valve closes before the tricuspid valve

(D) the tricuspid valve closes before the mitral valve

(E) filling of the ventricles has fast and slow components

2. When a person moves from a supine position to a standing position, which of the following compensatory changes occurs?

(A) Decreased heart rate
(B) Increased contractility
(C) Decreased total peripheral resistance (TPR)
(D) Decreased cardiac output
(E) Increased PR intervals

5. If the ejection fraction increases, there will be a decrease in

(A) cardiac output
(B) end-diastolic volume
(C) end-systolic volume
(D) heart rate

8. An increase in contractility is demonstrated on a Frank-Starling diagram by

(A) increased cardiac output for a given end-diastolic volume
(B) increased cardiac output for a given end-systolic volume
(C) decreased cardiac output for a given end-diastolic volume
(D) decreased cardiac output for a given end-systolic volume

22. The tendency for edema to occur will be increased by

(A) arteriolar constriction
(B) increased venous pressure
(C) increased plasma protein concentration
(D) muscular activity

24. During exercise, total peripheral resistance (TPR) decreases because of the effect of

(A) the sympathetic nervous system on splanchnic arterioles
(B) the parasympathetic nervous system on skeletal muscle arterioles
(C) local metabolites on skeletal muscle arterioles
(D) local metabolites on cerebral arterioles
(E) histamine on skeletal muscle arterioles

40. Cardiac output of the right side of the heart is what percentage of the cardiac output of the left side of the heart?

(A) 25%
(B) 50%
(C) 75%
(D) 100%
(E) 125%

46. Which of the following changes will cause an increase in myocardial O_2 consumption?

(A) Decreased aortic pressure
(B) Decreased heart rate
(C) Decreased contractility
(D) Increased size of the heart
(E) Increased influx of Na^+ during the upstroke of the action potential

48. A 24-year-old woman presents to the emergency department with severe diarrhea. When she is supine (lying down), her blood pressure is 90/60 mm Hg (decreased) and her heart rate is 100 beats/min (increased). When she is moved to a standing position, her heart rate further increases to 120 beats/min. Which of the following accounts for the further increase in heart rate upon standing?

(A) Decreased total peripheral resistance
(B) Increased venoconstriction
(C) Increased contractility
(D) Increased afterload
(E) Decreased venous return

57. Which agent is released or secreted after a hemorrhage and causes an increase in renal Na^+ reabsorption?

(A) Aldosterone
(B) Angiotensin I
(C) Angiotensin II
(D) Antidiuretic hormone (ADH)
(E) Atrial natriuretic peptide