1. A decrease in developed tension in cardiac muscle at high levels of stretch is due to:

Select one:

a. Decreasing available calcium

b. A decrease in the number of cross bridges between actin and myosin

c. Increased muscarinic transmission associated with high diastolic pressures

d. Disruption of myocardial fibres Correct. Ganong 23rd Edition pg 109

2. Which is FALSE regarding contraction and relaxation of skeletal muscle?

Select one:

a. Contraction involves inward spread of depolarisation along T tubules

b. Prior to contraction, increased Na+ and K+ conduction occurs in the end plate membrane

c. Relaxation involves the release of calcium from troponin

d. Contraction involves the release of K+ from the terminal cisterns Correct. Ganong 23rd Edition pg 100 figure 5-7

3. In visceral smooth muscle:

Select one:

a. The excitation contraction coupling time is rapid (<10ms)

b. Membrane potential has a resting value of −90mv

c. Muscle contracts when stretched in absence of innervation Correct. Ganong 23rd Edition pg 110 "shows continuous, irregular contractions that are independant of its nerve supply"

d. Binding of acetyl choline to nicotinic receptors increases Ca++ influx

4. Regarding cardiac muscle:

Select one:

a. The intercalated discs provide a weak union between fibres

b. There is no branching

c. It has no Z-lines

d. The striations resemble skeletal muscle Correct. Ganong 23rd Edition pg 106

5. Which is INCORRECT regarding the cardiac muscle action potential?

Select one:

a. The relative refractory period ends in phase 3

b. Calcium channels start to close during phase 4

c. Sodium ions enter via “fast” channels in phase 1 Correct. Ganong 23rd Edition pg 108 figure 5-17

d. Calcium ions enter via “slow” channels in phase 2

6. The functions of tropomyosin in skeletal muscle include:

Select one:

a. Sliding on actin to produce shortening

b. Acting as a “relaxing protein” at rest by covering up the sites where myosin binds to actin Correct. Ganong 23rd Edition pg 96

c. Binding to myosin during contraction

d. Releasing calcium after an action potential

7. Type I muscle fibres:

Select one:

a. Have fast glycolytic rates

b. Are more commonly found in muscle that performs explosive work

c. Have low oxidative capacity

d. Have a slow myosin isoenzyme ATPase rate Correct. Ganong 23rd Edition pg 103 table 5-2

8. In skeletal muscle relaxation:

Select one:

a. There is increased Na and K conduction in the end plate membranes

b. Calcium is released from Troponin Correct. Ganong 23rd Edition pg 100

c. There is a spread of depolarization along T tubules

d. A resting membrane potential of -65 mV is finally reached

9. Calmodulin is involved in:

Select one:

a. Smooth muscle relaxation

b. Skeletal muscle contraction

c. Skeletal muscle relaxation

d. Smooth muscle contraction Correct. Ganong 23rd Edition pg 53

10. Tetanic contraction of skeletal muscle:

Select one:

a. Occurs only with isometric contractions

b. Is due to increased calcium available for binding to troponin C

c. Enables a tension development of approximately 4 times that of individual twitch contraction Correct. Ganong 23rd Edition pg 101

d. Occurs because of the short refractory period of skeletal muscle