Previous exam questions in the nervous system

What is correct about exitation contraction coupling?
a) The action potential causes inflow of Na+ intracellularly, which binds to tubulin
b) The action potential causes inflow of Na+ intracellularly, which binds to troponin
c) The action potential causes intracellular release of Ca++,which binds to tubulin
d) The action potential causes intracellular release of Ca++, which binds to troponin.

What is the function of the sodium-potassium pump?
A Transporting potassium and Sodium across the cell membrane from low to high concentration by utilizing the membrane potential
B Transporting potassium and Sodium across the cell membrane from low to high concentration by use of energy in the form of ATP
C Transporting of sodium and potassium from high to low concentration by facilitated diffusion.
D Equalize extracellular and intracellular concentration of Sodium and Potassium.

And what is the result of this process?
A Utilizing the concentration gradient of sodium and potassium for synthesis of ATP.
B The concentration gradient of potassium lead to a diffusion of potassium that is not followed by anionic diffusion, and this builds up a membrane potential
C As the concentration differences of potassium and sodium across the cell membrane are removed (equalized), the differences in protein anions will create a membrane potential.
D As the intracellular concentrations of sodium and potassium becomes equal, the membrane potential is determined by the concentration of calcium.

Where is the regulatory centre for respiration situated in the nervous system?
A The sympathetic ganglia
B The brain stem
C The cerebellum
D The basal ganglia

Where in the central nervous system is pulse and blood pressure controlled?
A The cerebral cortex
B The cerebellum
C The brainstem
D The spinal cord

What is the function of myelin sheaths around nerve axons?
A Nutrition
B Mechanical support
C Increasing signal conduction
D Protection against infection

What are synapses?
A Synapses are support cells which works as the maintenance and immune cells of the nervous system
B Synapses are specialized nerve cells, whose primary function is transmission of the fast signal activity
throughout the nervous system
C Synapses are places of contact between a nerve cell and another cell (nerve cells, muscle cells or glandular cells).
D Synapses are extensions of support cells that establish intimate contact with nerve cell axons to facilitate impulse conduction.

What is correct about an action potential?
A An action potential is triggered by an increase in calcium in the extracellular fluid
B An action potential is triggered by an increase in calcium in the cytoplasm
C An action potential is triggered by a partial depolarisation of the cell membrane.
D An action potential is triggered by a patrial hyperpolarisation f the cell membrane

In the situation called “fight or flight response” one part of the peripheral nervous system is activated
even before action starts. Which?
A The parasympathetic system
B The sympathetic system
C The somatic motor neurons
D The somatic sensory neurons