SAQ

CASE 1: Ali was at the gym training; he was lifting weights by flexing and extending his forearm and elbow joint. After a while Ali felt an ache in the muscle, which was responsible for the movement. Then he took some rest and took some deep breaths. After ten minutes he did not feel the ache anymore.

Answer the following questions depending on the case above.

Q1) when Ali flexes his forearm and elbow joint, which muscle is the prime mover, and the antagonist?

Bicep brochii, Triceps

Q2) the following muscle originates from which embryonic germ layer

Paraxial mesoderm

Q3) which type of cellular adaption exhibited by the muscle in the following activity?

Hypertrophy

Q4) when Ali felt the muscle ache, what is the molecule that probably caused the pain, and which enzyme formed the molecule?

Lactate, Lactate hydrogenase

Case 2: a Pathologist preformed an autopsy on a patient that died from an unknown etiology. When the pathologist finished with the examination, his postmortem diagnosis was TB?

Q1) what is autopsy

Examining a body after death

Q2) name the organism that caused the disease. Then identify whether it is primary or opportunistic pathogen

Mycobacterium TB

Q3) which type of necrosis is associated with the disease?

caseous necrosis

Q4) the pathologist took a biopsy and examined it under the microscope. What do you expect he will find under the microscope?

Lymphocytes, giant cells, necrotic cells ( caseous)

Q5) if we took a WBC count (assuming the patient was alive), what type(s) of the WBC would be found in large amounts in the blood?

Lymphocytes, Macrophages, and sometimes eosinophil and basophils.