Option A: Role of a Nutrient

Discuss a role that one of the following nutrients plays within the human body. Explain how the nutrient works to perform the specific role and why it is important.

Total protein

Protein is one of the three macronutrients in our diet and plays a major role in building and maintaining muscle cells in the body. Muscle cells are essential because they allow for voluntary movement such as walking and involuntary actions such as beating of the heart. Muscle fibers are made up of myofibrils such as actin and myosin that cause the muscle to contract and relax, which causes movement. Myoglobin is a sarcoplasmic protein in muscles that store oxygen from hemoglobin until it utilized in metabolism. There are also regulatory proteins such as troponin that control the contractions based on the presence of Calcium. All these proteins in the muscle cells work together to allow for movement in the body. When we eat protein, it is first broken down into amino acids by stomach and small intestine, which are then absorbed into capillaries and built into new proteins through translation in ribosomes. These proteins are then used to build new muscle cells, which is why protein is essential to maintaining and building muscle.

Source:

https://www.physio-pedia.com/Muscle\_Proteins