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Biology

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Question 1

Fick's law is a physics law of diffusion that explains the process of diffusion, which is the movement of molecules from a region with a higher concentration to a region with a low concentration. According to the law, a diffusion process that observes and conforms to Fick's law is referred to as Fickian or normal diffusion (Gong, Tao, Fu, & Yang, 2014).

Question

The oxygen gets into bloodstream through inhalation during breathing in where air containing oxygen gets into the lungs. Oxygen contained in the air then moves into the blood stream from the lungs through diffusion across the alveoli. After that the blood moves to the tissues.

Question 3

Adenosine triphosphate, simply initiated as ATP, are molecules that carry energy. They are found in all living things cells. ATP aims to capture chemical energy, which is obtained from the molecules of food breakdown and then released to fuel all cellular processes in the body. In other words, the purpose of adenosine triphosphate is to ensure transportation of the energy, which is essential for every cellular metabolic activity (Patel *et al.*, 2017).

Question 4

Lung volume changes by increasing and decreasing its capacity. When the lungs are hyper-inflated they become larger as results of trapped air in them especially when someone is unable to exhale and push air out of their lungs. The trapped air occupies up more space such that the body finds it hard to get fresh air and thus as the lung tries to take more air its lung changes by increasing volume of its carrying capacity. The volume of lung also changes by

decreasing when the trapped air is exhaled and pushed. This means that the volume that was occupied by the trapped air decreases making the volume of the lung to also change by decreasing its carrying capacity.

Reference

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