Anatomy And Physiology Task 1

[Name of the Writer]

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**Respiratory System**

Replenishing oxygen level in the bloodstream and releasing toxic carbon dioxide from the body is the basic functionality of the respiratory system (Recio et.al, 2016). There are three main constituents of this system; the airway, lungs, and muscles. The respiration process initiates with the intake of air by the mouth or nose. The air is heated and filtered by mucous membranes in the nasal cavity. Next, the air goes to the pharynx. Nasopharynx, Oropharynx, and laryngopharynx are the three sections in which pharynx is divided. The pharynx then leads to the larynx that goes towards the lungs. The larynx directs the air to the trachea. The trachea is further divided in right and left bronchi. Each bronchi has small bronchioles that are connected to the alveoli. The exchange of blood occurs in alveoli. Diffusion is the process through which oxygen from air replaces carbon dioxide in the blood. Oxygen is transfused and carbon dioxide is removed from the bloodstream through alveolar sac (Recio et.al, 2016). The toxic carbon dioxide is then exhaled out of the body.

**Cardiovascular System**

The cardiovascular system initiates in the heart that continuously pumps blood which is circulated in the body (Recio et.al, 2016). Right atrium and ventricle commence pulmonary circuit while the system circuit is started in left atrium and ventricle. In the pulmonary circuit, carbon dioxide-rich blood enters the heart from the right atrium. This blood is pushed through muscle contraction into the right ventricle. From there the blood is directed to the lungs through the pulmonary artery. The exchange of gases takes place in the alveoli through diffusion. The oxygen-rich blood enters the heart from the left atrium through pulmonary veins. Blood is directed from the left atrium into the left ventricle. Muscles contractions push the blood into major arteries that are connected to the organs. Arteries and veins are interconnected through capillaries (Recio et.al, 2016). The tissues and organs exchange oxygen and carbon dioxide through the capillaries. Blood is carried upward in the body through superior vena cava and downward through inferior vena cava.

**References**

Recio, A., Linares, C., Banegas, J. R., & Díaz, J. (2016). Road traffic noise effects on cardiovascular, respiratory, and metabolic health: An integrative model of biological mechanisms. *Environmental research*, *146*, 359-370.