HW

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Q1) How is oxygen and carbon dioxide transported in human beings?

Ans) Oxygen and carbon dioxide are transported in human beings with a gas transportation system. This system is mainly composed of following parts.

Lungs: Lungs help in breathing in oxygen-rich air and breathing out carbon dioxide rich air.

Heart: Heart pumps deoxygenated blood to lungs for oxygenation and pumps oxygenated blood to different organs of the body.

Veins: Veins usually carry deoxygenated blood from different parts of the body to the heart. One exception is the pulmonary vein which carries oxygenated blood from lungs to heart.

Arteries: Arteries usually carry oxygenated blood from heart to different parts of the body. One exception is the pulmonary artery which carries deoxygenated blood from heart to lungs.

Q2) How are the lungs designed in human being to maximise the area for exchange of gases?

Ans) In the lungs, the air passage divides into smaller tubes, called bronchi which form bronchioles. The bronchioles terminate in balloon-like structures called alveoli. The alveoli present in the lungs provide maximum surface for exchange of gases. The alveoli have very thin walls and contain an extensive network of blood vessels to facilitate exchange of gases.

Q3) How are the alveoli designed to maximise the exchange of gases?

Ans) In human beings, to maximise the area for exchange of gases, inner surface of lungs has smaller tubes that terminate into balloon-like structures called alveoli. The walls of alveoli have extensive network of blood vessels.