

LIFE SCIENCES GRADE 11 2022

Practical Task Term 3: Gaseous Exchange Date: Name: 30

Duration: 45 minutes

INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

- This is a formal SBA task and needs to be done under supervised conditions in the classroom.
- Each learner completes this task on his/her own (under test conditions).
- Present your answers per the instructions of each question.
- 4. Draw all diagrams in pencil and labels in blue ink.
- The diagrams in this task may NOT be drawn to scale.

BACKGROUND INFORMATION

What is breathing?

Breathing is the process that moves air in and out of the body (lungs). It enables oxygen to enter the body and carbon dioxide to be expelled.

Why is breathing so necessary for life?

The oxygen in the air is needed for the oxidation of food to release energy during respiration. This energy is used to perform the work needed to keep cells and organisms alive. Carbon dioxide is released during respiration and must be expelled, otherwise it will lower the pH of body fluids.

What is gaseous exchange?

There is an exchange of gases in the lungs. When we breath in, oxygen in the inhaled air in the lungs diffuses into the blood from the alveoli. Carbon dioxide diffuses from the blood into the alveoli and is breathed out.

What is the breathing mechanism?

The breathing mechanism allows for pulmonary ventilation, commonly known as 'breathing'. This is the process of moving air into and out of the lungs. Air flows into the lungs during inspiration (inhalation) and out of the lungs during expiration (exhalation). Air flows because of pressure differences between the atmosphere and the oases inside the lungs.

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Scott C. Dulebohn

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