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Level 1 Biology 2022

90929 Demonstrate understanding of biological ideas relating to a mammal(s) as a consumer(s)

Credits: Three

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of biological ideas relating to a mammal(s) as a consumer(s).	Demonstrate in-depth understanding of biological ideas relating to a mammal(s) as a consumer(s).	Demonstrate comprehensive understanding of biological ideas relating to a mammal(s) as a consumer(s).

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

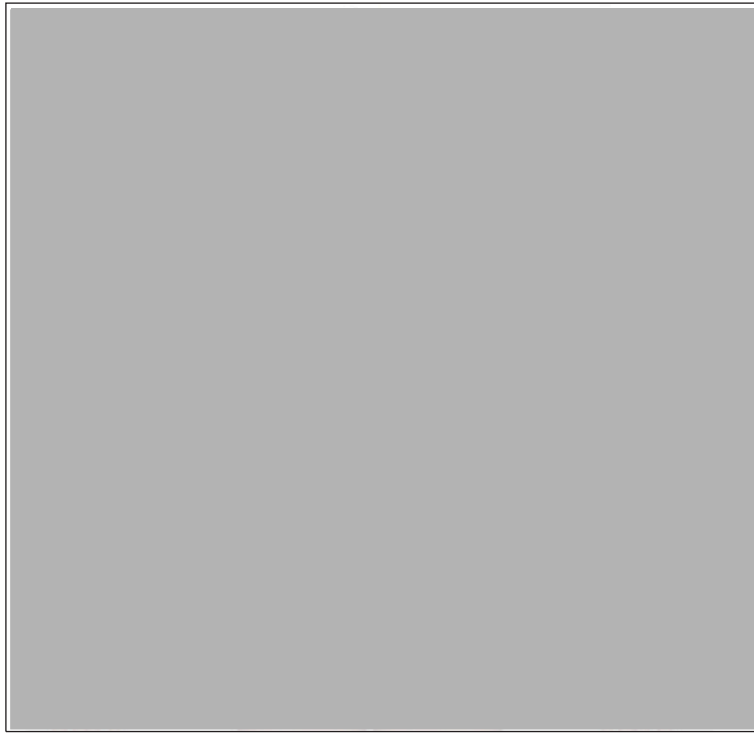
Check that this booklet has pages 2–8 in the correct order and that none of these pages is blank.

Do not write in any cross-hatched area (✂). This area may be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

QUESTION ONE: PERISTALSIS AND DIGESTION

Different parts of the digestive system are involved in different stages of the digestion process. Peristalsis is an important part of the digestive process that occurs throughout the digestive system.



The Human Digestive System

Source: www.niddk.nih.gov/health-information/digestive-diseases/digestive-system-how-it-works

Compare and contrast the function of peristalsis in different parts of the digestive system (oesophagus, stomach, small intestine, large intestine) to ensure that food is digested efficiently.

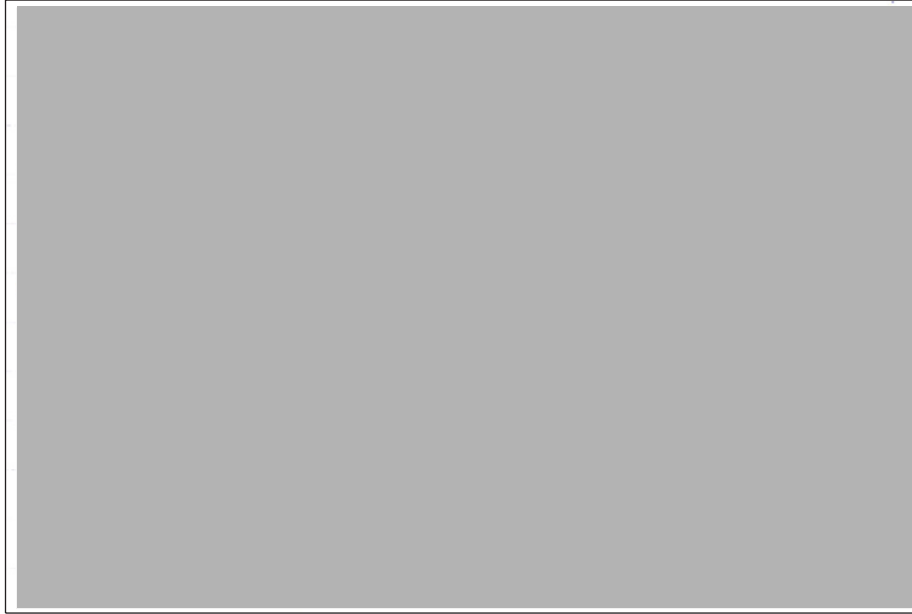
In your answer:

- describe the process of peristalsis
- explain how peristalsis occurs
- discuss the function of peristalsis in TWO different parts of the digestive system, and how peristalsis helps the overall process of digestion.

QUESTION TWO: ABSORPTION

Once food has been digested, it needs to be absorbed into the bloodstream so that nutrients can be transported around the body to where they are needed. Digested food is absorbed through the villi, which are microscopic structures that line the wall of the small intestine.

A student drew a simple diagram to show the structures found inside villi.



Source: <https://socratic.org/questions/why-do-we-have-villi-in-the-small-intestine>

Discuss the process of absorption of digested food through the villi.

In your answer:

- describe the process of absorption of digested food
- explain why some parts of the digestive system have villi while other parts do not
- discuss how villi increase the efficiency of the absorption of digested food, and why this is important to the overall survival of a consumer.

QUESTION THREE: DIGESTION

Chemical and physical digestion of food begins in the mouth through the action of the teeth, tongue, saliva, and digestive enzymes.



Adapted from: www.britannica.com/science/human-digestive-system

Discuss how the mouth is involved in the process of digestion.

In your answer:

- describe the types of digestion that occur in the mouth
- explain how the enzymes found in saliva start the process of digestion in the mouth
- discuss how the teeth, tongue, saliva, and enzymes work together to ensure an efficient start to the process of digestion of food.

**Extra space if required.
Write the question number(s) if applicable.**

QUESTION
NUMBER

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