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Level 1 Biology 2021

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: PHYSICAL AND CHEMICAL DIGESTION

Digestion of food in mammals occurs as a result of physical and chemical processes in the digestive system.



Adapted from: <http://chulawired.com/wp-content/uploads/2014/10/Picture3.jpg>

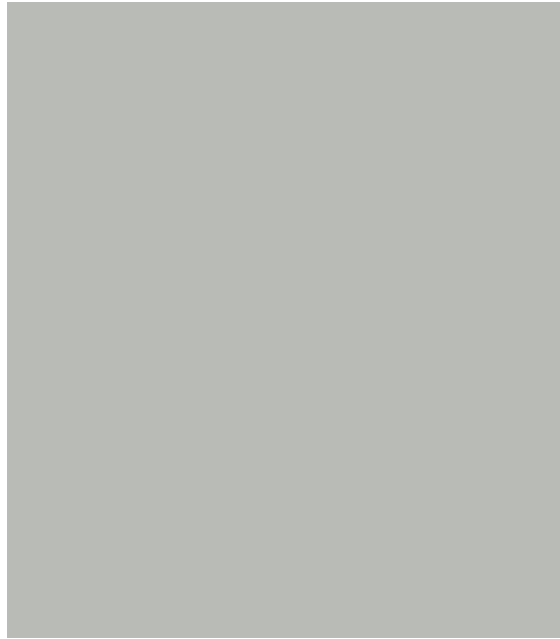
Discuss how chemical and physical digestion work together to enable food to be digested efficiently in a mammal.

In your answer:

- describe the purpose of the digestion of food
- explain how both chewing and enzyme activity contribute to the digestion of food
- compare and contrast physical digestion and chemical digestion to show how both processes are important in enabling food to be digested efficiently.

QUESTION TWO: TRANSPORTING OXYGEN AND THE PRODUCTS OF DIGESTION

Oxygen (from the lungs) and products of digestion (from the digestive system) are transported around the body of a mammal in the circulation system.



Adapted from: <https://reverehealth.com/live-better/how-body-systems-connected/>

Discuss how the transport of both oxygen and the products of digestion contribute to the survival of a mammal.

In your answer:

- describe the purpose of transporting oxygen and the products of digestion around the body of a mammal
- explain how the parts of the circulation system enable oxygen and the products of digestion to be transported around the body of a mammal
- discuss why the circulation of oxygen and the products of digestion around the body of a mammal is essential to its survival.

QUESTION THREE: HERBIVORES AND CARNIVORES

Mammals can be grouped according to what they eat. Two of these groups are herbivores and carnivores. Herbivores and carnivores differ in the physical and chemical aspects of their digestive systems.

Diagram comparing the digestive systems of a herbivore and a carnivore



Adapted from: https://biology-forums.com/gallery/33_25_07_11_1_19_47.jpeg

Compare and contrast the digestive systems of carnivores and herbivores to discuss how the digestive system of each allows it to digest its food efficiently.

In your answer:

- describe a physical difference and a chemical difference between the digestive systems of carnivores and herbivores
- explain why the digestive systems of carnivores and herbivores are different
- discuss how the physical and chemical differences between carnivores' and herbivores' digestive systems enable them to digest food efficiently to ensure their survival.

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

QUESTION
NUMBER

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