

CREST Science Olympiad (CSO)
Worksheet

Class 7

Topic

Nutrition in Animals









Worksheet on Nutrition in Animals

- 1. Please review the following statements and determine which one is true and which one is false.
 - I. Amoeba eliminates undigested waste material through specialised projections called pseudopodia.
 - II. Amoeba digests their food within specialised compartments called food vacuoles.
 - III. Amoeba relies on photosynthesis to obtain nutrition.

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a. I: True, II: True, III: Falseb. I: True, II: False, III: Falsec. I: False, II: False, III: Falsed. I: False, II: True, III: False
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2. Which of the following statements about nutrition in ruminants are correct? Select all that apply.

Statement 1: Ruminants have a specialised digestive system that allows them to digest plant material efficiently.

Statement 2: The digestive system of ruminants makes enzymes to break down cellulose.

Statement 3: The partially digested food in ruminants is called cud.

Statement 4: All herbivores fall under the category of ruminants.

- a. Statements 1, 2, and 3 are correct.
- b. Statements 2 and 3 are correct.
- c. Statements 1 and 3 are correct.
- d. Statements 1 and 2 are correct.
- 3. How does the structure of teeth in carnivores differ from that of herbivores?
 - a. Carnivores have sharp incisors for cutting meat, while herbivores have flat molars for grinding plants.

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- b. Carnivores have flat incisors for biting plants, while herbivores have sharp molars for tearing meat.
- c. Both carnivores and herbivores have the same tooth structure.
- d. Carnivores have extra teeth compared to herbivores.
- 4. In the following question, you will find an assertion and a reason. Select the appropriate option that applies.

Assertion: The small intestine is the primary site for nutrient absorption in the digestive system.

Reasoning: The small intestine is lined with millions of tiny finger-like projections called villi, which greatly increase its surface area. This allows for the efficient absorption of nutrients into the bloodstream.

- a. Both the assertion and reasoning are correct, and the reasoning explains the assertion.
- b. Both the assertion and reasoning are correct, but the reasoning does not explain the assertion.
- c. The assertion is correct, but the reasoning is incorrect.
- d. The assertion is incorrect, but the reasoning is correct.

5. Match the following enzymes and juices with their respective roles in digestion.

	Column I		Column II
1.	Amylase	a.	Breaks down proteins in the stomach
2.	Pepsin	b.	Aids in the digestion of carbohydrates in the mouth
3.	Bile	C.	Helps in the breakdown of fats in the small intestine
4.	Pancreatic juice	d.	Contains enzymes for the digestion of carbohydrates,
			proteins, and fats

- a. 1:C, 2:D, 3:A, 4:B
- b. 1:B, 2:A, 3:C, 4:D
- c. 1:A, 2:B, 3:C, 4:D
- d. 1:B, 2:A, 3:D, 4:C



Answer Key

1. a -

- I. False Amoeba does not eliminate undigested waste material through specialised projections called pseudopodia.
- II. True Amoeba digests their food within specialised compartments called food vacuoles.
- III. False Amoeba does not rely on photosynthesis to obtain nutrition; it obtains nutrition by ingesting food particles.

2. c-

Statement 1: Ruminants have a specialised digestive system that allows them to efficiently digest plant material.

Statement 3: The partially digested food in ruminants is indeed called cud.

Statement 2 is incorrect because ruminants rely on symbiotic bacteria in their digestive system to break down cellulose, rather than producing the enzymes themselves. Statement 4 is incorrect because not all herbivores are ruminants; there are other types of herbivores as well.

- **3.** a Carnivores have sharp incisors that are used for tearing and cutting meat, allowing them to catch and consume their prey. Herbivores, on the other hand, have flat molars that are well-suited for grinding and crushing plant material to aid in the digestion of fibrous plants.
- **4.** a The small intestine is the primary site for nutrient absorption is supported by the fact that it is lined with villi, which greatly increase the surface area for efficient nutrient absorption. The reasoning explains why the assertion is true, making option a) the correct choice.

5. b -

Amylase: Aids in the digestion of carbohydrates in the mouth

Pepsin: Breaks down proteins in the stomach

Bile: Helps in the breakdown of fats in the small intestine

Pancreatic juice: Contains enzymes for the digestion of carbohydrates, proteins, and fats

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