Measuring Time Through the Ages

A. Fill in the Blanks

1. The partially digested, semi-solid food in the stomach is called _____.
2. Amoeba uses temporary finger-like extensions called _____ to capture its prey.
3. The process of chewing the cud by ruminants is known as _____.
4. Bile juice, which is essential for fat digestion, is produced by the _____ and stored in the gall bladder.
5. The removal of faecal matter from the body through the anus is called _____.

B. Match the Following;

Match the timekeeping device or concept in Column A with its correct description or principle in Column B.

Column A	Column B
1. Stomach	A. Complete digestion of food.
2. Villi	B. "False feet" in Amoeba.
3. Bile Juice	C. Secretes saliva
4. Pseudopodia	D. Helps in the digestion of fats
5. Salivary Gland	E. Releases hydrochloric acid

C. Practice Problems

Answer the following questions in brief.

1. What is the role of Hydrochloric Acid (HCl) in the stomach?
2. Differentiate between absorption and assimilation.
3. What are the four types of teeth in an adult human? Mention one function for each.
4. Explain the function of the pancreas in the digestive process.
5. What is peristalsis and where does it occur?
6. Why can humans not digest cellulose, whereas ruminants can?
7. What is the function of mucus secreted in the stomach?
8. Describe how an Amoeba captures and digests its food.

9. What happens to the undigested food in the large intestine?

10 What is the final product of digestion for carbohydrates, proteins, and fats?

D. Warm-up Questions

Answer these quick questions to refresh your memory.

1. What is the process of taking food into the body called?
2. Name the largest gland in the human body.
3. What are the finger-like projections on the inner wall of the small intestine called?
4. Cows and buffaloes are examples of what type of animal, based on their digestive process?
5. Where does the digestion of food begin in humans?

E. Challenge Questions

Think critically and apply your knowledge to answer these questions.

1. What would be the consequence if the villi in the small intestine were completely flat instead of being finger-like projections?
2. Trace the journey of a protein molecule (e.g., from a piece of chicken) from ingestion to assimilation. Mention the key organs and enzymes involved.
3. A person has had their gall bladder surgically removed. What type of food should they limit in their diet and why?
4. Explain the statement: "All animals, whether carnivores or herbivores, ultimately depend on plants for their food".
5. Compare the process of digestion in Amoeba and humans. List one similarity and two differences.

F. Word Problems & Application

Apply your scientific knowledge to these real-life scenarios.

1. Ria chews a piece of plain bread for a few minutes without swallowing. After some time, it starts to taste sweet. Why does this happen?
2. A doctor advises a patient suffering from acidity to take an antacid. How does an antacid provide relief?
3. Why do we get instant energy from drinking a glucose solution, but it takes longer to get energy from a chapati, even though both are sources of carbohydrates?
4. An athlete is preparing for a competition and is advised to eat a diet rich in proteins and carbohydrates. What role do these nutrients play in their body?
5. If a person accidentally swallows a small, smooth plastic bead, it will pass through their digestive tract and be egested. Why is it not digested?

6. True or False

1. The pancreas secretes bile juice. _____
2. Digestion of starch begins in the stomach. _____
3. The tongue helps in mixing food with saliva. _____
4. The small intestine is shorter in length than the large intestine. _____
5. Ruminants bring back swallowed food into their mouth to chew it again. _____