CBSE TEST PAPER-02

CLASS - XI BIOLOGY

(Digestion and Absorption)

General Instruction:

- All questions are compulsory.
- Question No. 1 to 3 carry one marks each. Question No. 4 to 6 carry two marks each. Question No. 7 and 8 carry three marks each. Question No. 9 carry five marks.

1. What is the main function of bile salt?

2. Name the watery fluid secreted from Bruner's gland in duodenum.

3. What is atheroma?

4. How does fat absorption takes place?

5. How is food absorbed?

6. What are enzymes?

7. What is the action of salivary amylase? Differentiate between lipases and peptidases?

8. It is absolutely not necessary to produce amylase in an active form in our body. But it is not in the case of trypsin. Given reasons.

9. Name the enzymes for protein digestion in the gastric, pancreatic and intestinal, the substrate they digest and products of their action.

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[ANSWERS]

Ans 01. It reduces the surface tension of fat droplets causing their break down into many small ones.

Ans 02. Mucoid fluid is secreted from Bruner's gland in duodenum.

Ans 03. Deposition of cholesterol on the walls of arteries.

Ans 04. Fat absorption – It occurs as monoglycerides and fatty acids. These are resynthesized into triglycerides which in turn, combine with cholesterol. They form chylonicrons chylomicrons pass into the lymphatic system for circulation.

Ans 05. The food eaten up by individuals is in complex form. The digestive glands secrete enzymes in different parts of alimentary canal and digest it into simpler form, mainly soluble form. The digested food consist of fatty acid and glycerol are absorbed through intestinal wall through lacteals. The sugars, amino acids, salts and water passed into blood circulation, water absorption takes place in colon (large intestine).

Ans 06. Enzymes are defined as "an organic catalyst found in a living organism, which alters the fate unchanged at the end of the reaction; but itself remain unchanged at the end of the reaction; and is produced by the living organism but is not itself alive.

Ans 07. Salivary amylase digest starch into sugars.
Difference between lipases and Peptidases.

	Lipases	Peptidases
1.	They are insoluble in water.	They are soluble in water.
2.	These hydrolyse fats & oils.	These hydrolyse proteins,

Ans 08. Salivary amylase is secreted in buccal cavity and it digests starch and sugar (carbohydrates). Since amylase does not act on protein of which animal tissues (buccal cavity) is made from, it is secreted in its original form.

Trypis – It acts on proteins. The wall of the alimentary canal is also made of protein. Hence it is very essential that it is secreted in an inactive form and it should become active when food protein is available in the alimentary canal. Thus to prevent damage (digestion of body) it is secreted in an inactive form.

Ans 09.

	Juices	Enzymes	Substrates	Products
1	Gastric Juice	Pepsin Renin	Proteins, casein (milk) casein	Peptones, Paracasein (curd) Para casein
2	Pancreatic Juice	Trypsin Chymotrypsin Carboxypeptidase	i) Protein ii) Chymotrypsinogen (inactive) iii)Procarboxypeptidases (inactive) iv)Protelactase (inactive) v) Fibrinogen (blood) casein Peptides	Peptides Chymotrypsin (active) Carboxy peptidases (active) Elactase (active) Fibrin (clot) Paracasein Small peptides, amino acids
3	Intestinal Juice	Enterokinase Amino peptidases Dipeptidases	Trypsinogen (inactive) Peptides Dipeptides	Trysin (active) small peptides, amino acid Amino acids.