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**QUESTION**

Miss Egbe Amanda attended a birthday party organized by Mr. Solomon, during the party she was served fried rice, salad, fried chicken and water. Enumerate in details the digestive processes of the above food she ate during the celebration

**ANSWER**

•DIGESTIVE PROCESSES OF FRIED RICE

Fried rice generally is a mixture of different classes of food

Because it contains rice which is carbohydrates and vegetables like carrots ,green beans, peas which is under vitamins

But I’m going to be taking fried rice as a whole as carbohydrates

Now to begin with, the digestion of fried rice i.e carbohydrates begins in amanda’s mouth.

Her salivary enzyme amylase begins the breakdown of food starches into maltose, a disaccharide. As the bolus of food travels through the esophagus to her stomach, no significant digestion of carbohydrates takes place. Her esophagus produces no digestive enzymes but does produce mucous for lubrication. The acidic environment in amanda’s stomach stops the action of the amylase enzyme.

The next step of carbohydrate digestion takes place in her duodenum. Recall that the chyme from the stomach enters the duodenum and mixes with the digestive secretion from the pancreas, liver, and gallbladder. Pancreatic juices also contain amylase, which continues the breakdown of starch and glycogen into maltose, a disaccharide. The disaccharides are broken down into monosaccharides by enzymes called maltase, sucrase, and lactase, which are also present in the brush border of the small intestinal wall. Maltase breaks down maltose into glucose. The monosaccharides (glucose) thus produced are absorbed and then can be used in metabolic pathways to harness energy. The monosaccharides are transported across the intestinal epithelium into the bloodstream to be transported to the different cells in the body.

• DIGESTIVE PROCESS OF SALAD

Salad is a vegetable which is under the class of food vitamins.

Digestion of vitamins begins in the mouth, when amanda chews her food.

When the food enters her stomach, hydrochloric acid and other stomach enzymes help release its nutrients. Her pancreas helps by releasing bile that aids with digestion. From this point, the vitamins travel to ananda’s small intestine, where they are absorbed into the bloodstream. Her blood carries the nutrients to your liver, where they are used up immediately, stored for later use or sent to the kidneys for excretion through urine.

• DIGESTIVE PROCESS OF FRIED CHICKEN

Fried chicken is under the class of food called proteins.

Digestion of fried chicken which is protein begins when amanda takes the fried rice into her mouth then it passes through her esophagus then gets to her stomach where the digestion process begins in the stomach with the action of an enzyme called pepsin. Pepsin is the active protein-digesting enzyme of the stomach. When pepsin acts on the protein molecule, it breaks the bonds that hold the protein molecule together, called peptide bonds. When these bonds are broken, you get chains of amino acids linked together called polypeptides.

These polypeptides then move into Amanda’s small intestine, where digestion will be completed by additional enzymes.

In the small intestine, pancreatic enzymes, called trypsin, chymotrypsin, and carboxypeptidase, really go to work breaking down the polypeptides. These enzymes enter the duodenum via the pancreatic duct. These pancreatic enzymes are helped by the brush border enzymes.

The peptide bonds holding the polypeptides together continue to be hydrolyzed, or broken down, and result in smaller units called peptides.Enzymes continue to break down polypeptides and peptides into amino acids. Because amino acids are very small, they are able to be absorbed through the small intestine lining and into your bloodstream.

• DIGESTIVE PROCESS OF WATER

The water amanda took is under the class of food water.

Water is a very simple molecule, so her body doesn’t have to break it down into smaller, simpler molecules.water is directly absorbed through the epithelial cells that cover Amanda’s intestinal tract. Amanda’s small intestine is responsible for the absorption of most of the water that she consumed.

From the water that she consumed,90% is absorbed by the small intestine. The remaining 10% is passed on to the large intestine, which reabsorbs as much water as it can from the waste materials that are ready to be excreted out of the body as faeces.