

CHUKA UNIVERSITY

THIRD YEAR EXAMINATION BIOC 313 : NUTRITIONAL BIOCHEMISTRY

STREAM: Y3S1BSc. BIOMEDICAL SCIENCE, BIOCHEMISTRY

TIME: 2 HOURS _____

INSTRUCTIONS

- i. **Answer Question One and any other Two Questions**
- ii. **Do not write on the question paper**

Question One (30 marks)

- a. Briefly discuss the regulation of human pancreatic juice. (5 marks)
- b. Describe the digestion of food in the small intestines of human being. (6 marks)
- c. Discuss the absorption of minerals in monogastric animals (6 marks)
- d. With the aid of a diagram, elucidate the pre-caecal digestion in the horse. (7 marks)
- e. Explain in detail the ruminant digestive development from birth until maturity. (6 marks)

Question Two (20 marks)

- a. Discuss in detail the regulation of gastric secretion in human beings. (10 marks)
- b. The pancreas is a very important organ in human digestion. Discuss. (10 marks)

Question Three (20 marks)

- a. The pig is an example of a monogastric organism, Discuss the digestion of food in the mouth and stomach of the pig. (10 marks)
- b. Discuss in details the absorption of the digested carbohydrates, fats and proteins in monogastric animals (10 marks)

Question Four (20 marks)

- a. With the aid of a diagram, discuss the ruminant digestive anatomy and function. (10 marks)

- b. Based on the diets they prefer, ruminants can be classified into distinct feeding types:
Discuss (10 marks)