BIOC 00113





UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF CERTIFICATE IN ANIMAL HEALTH AND PRODUCTION

BIOC 00113: BASIC BIOCHEMISTRY

STREAMS:

TIME: 2 HOURS

8.30 A.M. – 10.30 A.M.

DAY/DATE: THURSDAY 12/04/2018

INSTRUCTIONS:

• Answer question one and any other two questions.

QUESTION ONE (30 MARKS)

(a) State the functions of the following cell organelles. (3marks)

- (i) Ribosomes
- (ii) Smooth endoplasmic reticulum
- (iii) Chloroplast
- (b) Convert the following Fischer structures of glucose and ribose into Haworth structures. (4 marks)

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(d) Differentiate between saponifiable and non-saponifiable lipids giving examples of each. (4marks) (e) Giving appropriate structures, differentiate between an aldose and ketose. (4marks) (f) Discus 3 factors that cause denaturation of proteins. (6 marks) (g) An individual has protein intake of 95g and 24hr UUN is 15g. Determine the nitrogen balance. (3 marks) (h) The nitrogen content of feed is 6% and a cow eats 1200g. The amount of nitrogen in urine was 10% and the cow excreted 80g of urine. If the endogenous urinary nitrogen is 0.4 and the metabolic fecal nitrogen is 0.5, calculate the biological value. (4 marks) QUESTION 2 (20 MARKS) (6 marks) (a) Discuss 3 broad classifications of carbohydrates. (6 marks) (b) Explain 5 factors affecting enzyme activity. (10 marks) (i) Cellulose (ii) (iii) Ribose (iv) (iv) State and explain 5 biological functions of protein. (10 marks) (b) Discuss the characteristic features of carbohydrates. (4 marks) (c) Define the term dysphagia giving its causes. (4 marks) (c) Define the term dysphagia giving its causes. (4 marks) (b) Discuss the characteristic features of carbohydrates in animal life. (8 marks) (c) Define the toru functions of carbohydrates in animal life. (4 marks) (c	(c)	Differentiate between homoglycans and heteroglycans.	(2 marks)	
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