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**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF ANIMAL SCIENCE AND FISHERIES
SEPTEMBER 2020_1**

COURSE CODE: ANP 308

COURSE TITLE: Metabolism of Carbohydrates, Lipids, Proteins and Nucleic Acids

CREDIT UNIT: 2 CU

TOTAL SCORE: 70 MARKS

TIME ALLOWED: 2 Hours

INSTRUCTIONS: ANSWER QUESTION 1 (25 MARKS) AND ANY OTHER THREE (15 MARKS EACH)

- Q1a Define carbohydrates and glycogenesis
- b Give an overview of the major pathways of carbohydrate metabolism, emphasizing the fate of glucose but also indicating the sites of entry of galactose and fructose into the pathways
- c Describe the Krebs's cycle. **25 marks**
- Q2a Define simple proteins.
- b State and explain the examples of simple proteins. **15 marks**
- Q3 Write short note on the following:
- (i) Transamination
- (ii) Oxidative deamination **15marks**
- Q4a Give the functions of lipids.
- b Enumerate the factors affecting absorption of lipids. **15marks**
- Q5 Explain the stepwise reaction involved in the production of ketone bodies using word equations only. **15 marks**
- Q6 Write short notes on the following:
- (i) Glycogen
- (ii) Lactose
- (iii) Sucrose **15marks**