



NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF ANIMAL SCIENCE AND FISHERIES

COURSE CODE: ANP308

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

CREDIT UNIT: 2

TOTAL SCORE: 70 MARKS

TIME ALLOWED: 2 Hours

INSTRUCTIONS: ATTEMPT QUESTIONS 1 (25marks) AND ANY OTHER THREE (15 marks each = 45 marks)

- Q1a Define carbohydrates **1 mark**
b Define glycogenesis **1 mark**
c 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 **5 marks**
d Describe the Kreb's cycle. **18 marks**
- Q2a Define simple proteins. **1 mark**
b State and explain the examples of simple proteins. **14 marks**
- Q3 Write short note on the following:
(i) Transamination **6½ marks**
(ii) Oxidative deamination **8½marks**
- Q4a Give the functions of lipids. **7 marks**
b Enumerate the factors affecting absorption of lipids. **8 marks**
- 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 **5 marks**
(ii) Lactose **7 marks**
(iii) Sucrose **3 marks**