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UNIVERSITY OF ESWATINI

DEPARTMENT OF FOOD AND NUTRITION SCIENCES

SPECIAL ASSESSMENT PAPER

PROGRAMME	:	BACHELOR OF SCIENCE IN FOOD SCIENCE, NUTRITION AND TECHNOLOGY YEAR II
COURSE CODE	:	FNS209
TITLE OF PAPER	:	NUTRITION AND METABOLISM
TIME ALLOWED	:	TWO (2) HOURS
INSTRUCTIONS	:	ANSWER QUESTION 1 ANY OTHER 2

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QUESTION 1 (COMPULSORY)

a. Define the following
   i. Nutrients
   ii. Anabolism
   iii. Glycolysis
   iv. Glycogenesis
   v. Gluconeogenesis

2 x5 = 10marks

b. Explain the difference between digestion and metabolism, support with examples.

5 x2 = 10marks

c. Discuss the different movements of food along the gastrointestinal tract and the importance of these movements.

4 x5 = 20marks

TOTAL: 40marks

QUESTION 2

a. Explain the significance of the electron transport chain in production of ATP. **(10marks)**

b. Discuss the metabolic reactions that take place during the absorptive state. **(20marks)**

QUESTION 3

a. Explain the action of insulin during the body's absorptive state.

10marks

b. Explain the effects of genetic metabolic disorders caused by the following:
   i. Galactosaemia
   ii. Phenylketonuria

2 x5= 10marks

c. State the location where these metabolic processes take place:

i. Chemical digestion

ii. Glycogen storage

iii. Krebs cycle

iv. Glycolysis

v. Electron transport chain.

10marks

QUESTION 4

a. Discuss the five functions of the gastrointestinal tract **5 x4=20marks**

b. Discuss the functions of water in metabolism **10marks**