



1ST SEM. 2009/2010

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: B. Sc. AGRON.; B.Sc. ANIMAL SCIENCE; B.Sc. HORT. & B.Sc. FSNT II.

COURSE CODE: AS 202

TITLE OF PAPER: BIOCHEMISTRY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY 4 QUESTIONS.

THIS PAPER SHOULD NOT BE OPENED UNTIL THE CHIEF INVIGILATOR HAS GRANTED PERMISSION.

QUESTION 1

Discuss the classification of proteins. (25 Marks)

QUESTION 2

Describe and illustrate the following bonds of biomolecules, also state their functions.

- a. Glycosidic bonds (6 Marks)
- b. Peptide bonds (8 Marks)
- c. Hydrogen bonds of water molecules (6 Marks)
- d. Disulfide bonds (5 Marks)

QUESTION 3

Discuss and illustrate the catabolism of glucose to pyruvate. (25 Marks)

QUESTION 4

Using structures to illustrate your answer, describe the following biomolecules and state their natural sources.

- a. Amino sugars (5 Marks)
- b. Basic amino acids (5 Marks)
- c. Leukotrienes (5 Marks)
- d. Purines (5 Marks)
- e. Ascorbic acid (5 Marks)

QUESTION 5

Compare and contrast the following:

- a. Catabolism and anabolism (6 Marks)
- b. RNA and DNA (8 Marks)
- c. Saturated fatty acid and unsaturated fatty acids (4 Marks)
- d. Reversible and irreversible enzyme inhibitor (4 Marks)
- e. Reducing and non - reducing sugars (3 Marks)