



**1<sup>ST</sup> SEM. 2005/2006**

## **UNIVERSITY OF SWAZILAND**

### **FINAL EXAMINATION PAPER**

**PROGRAMME:** B. Sc. HOME ECONOMICS IV, FST  
OPTIONS;

**COURSE CODE:** FST 401

**TITLE OF PAPER:** FOOD CHEMISTRY

**TIME ALLOWED:** TWO (2) HOURS

**INSTRUCTIONS:** ANSWER ANY 4 QUESTIONS.

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

**QUESTION 1**

Discuss and illustrate hydrogen bonding of water and its role in gel formation

(25 Marks)

**QUESTION 2**

Briefly discuss:

- a) Cyanogenic glucosides
- b) Fatty acids in foods

(13 Marks)

(12 Marks)

**QUESTION 3**

Using structures to illustrate your answer, briefly describe the following food constituents and state their common food sources

- a) Starch
- b) L- Fucose and L – Rhamnose
- c) Amino Sugars

(10 Marks)

(10 Marks)

(5 Marks)

**QUESTION 4**

Using illustrations to demonstrate your answer, contrast glycosidic bonds and peptide bonds of food biopolymers.

(25 Marks)

**QUESTION 5**

- a) Describe and illustrate triacylglycerides and explain what their natural food source are.
- b) Describe and illustrate lactose and explain what is its natural food source .

(12 Marks)

(13 Marks)