



1ST SEM. 2006/2007

PAGE 1 OF 3

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME : DIPLOMA IN HOME ECONOMICS
EDUCATION & HOME ECONOMICS
YEAR II**

COURSE CODE : FN 201

TITLE OF PAPER : INTRODUCTION TO FOOD SCIENCE

TIME ALLOWED : TWO (2) HOURS

**INSTRUCTIONS : ANSWER QUESTION ONE (1)
AND ANY OTHER (2) QUESTIONS**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN
GRANTED BY THE CHIEF INVIGILATOR**

QUESTION 1 [COMPULSORY]

- a) Discuss the occurrence of monosaccharide and disaccharide sugars in food by giving two examples in each class.

[10 marks]

- b) Discuss the composition of starch, its properties and its application in the manufacture of food by giving an example in each application.

[15 marks]

- c) Explain the process of starch gelatinization and retrogradation.

[10 marks]

- d) Discuss factors that will influence gel formation in pectin solution.

[5 marks]

[Total = 40 marks]

QUESTION 2

- a) Discuss **three** applications of protein functionality in food by giving an example in each case.

[6 marks]

- b) Explain why some fats are liquid and some are solid at room temperature.

[4 marks]

- c) Explain the process of hydrolytic and oxidative rancidity in foods containing fats and also explain what preventative measures can be taken.

[12 marks]

- d) Name **two** organic acids in foods and explain their role in food.

[8 marks]

[Total = 30 marks]

QUESTION 3

- a) Discuss the composition of the wheat kernel and the milling process of wheat to produce flour including bleaching and vitamin fortification.

[12 marks]

- b) Discuss **five** changes that take place in the ripening of fruits and vegetables.

[10 marks]

- c) Discuss **four** changes that take place during meat cooking.

[8 marks]

[Total = 30 marks]

QUESTION 4

- a) Discuss **three** quality factors of food that can be evaluated by sensory evaluation methods.

[6 marks]

- b) Discuss **five** food hygiene practices.

[10 marks]

- c) Discuss the **five** major ingredients in bread making and their function.

[10 marks]

- d) Discuss the enzymatic browning reaction in food.

[4 marks]

[Total = 30 marks]