



2nd SEM. 2005/2006

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME : BACHELOR OF SCIENCE IN HOME
ECONOMICS [FOOD SCIENCE AND
TECHNOLOGY OPTION] YEAR IV**

COURSE CODE : FST 412

TITLE OF PAPER : FOOD MACHINERY & PLANT DESIGN

TIME ALLOWED : TWO (2) HOURS

**INSTRUCTIONS : ANSWER QUESTION ONE (1)
AND ANY OTHER (3) QUESTIONS**

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GRANTED BY THE CHIEF INVIGILATOR**

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QUESTION 1 [COMPULSORY]

Describe the design requirements for the following structures in a food processing plant.

- a. Floors
- b. Drains
- c. Walls
- d. Windows and sills
- e. Doors
- f. Lighting
- g. Ventilation

[Total = 25 marks]

QUESTION 2

Describe factors that will influence the geographic location and the size of a food processing plant.

[Total marks = 25]

QUESTION 3

Describe **FIVE** important factors in the design of food processing equipment with emphasis on food contact surfaces and also describe **FIVE** points that should be taken into consideration when installing food processing equipment.

[Total marks = 25]

QUESTION 4

Describe in detail any two pieces of equipment used in the following unit processing operations:

- a. Cleaning
- b. Sorting
- c. Peeling
- d. Size reduction equipment for solid foods
- e. Size reduction of immiscible liquids

[Total marks = 25]

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QUESTION 5

Describe in detail any two pieces of equipment used in each of the following units processing operations:

- a. Mixing
- b. Centrifugation
- c. Filtration
- d. Pasteurization
- e. Heat Sterilization

[Total = 25 marks]