

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR
OF SCIENCE IN FOOD SCIENCE TECHNOLOGY

FOST 234: FOOD PLANT UTILITIES AND SERVICES

STREAMS:

TIME: 2 HOURS

DAY/DATE: THURSDAY 7/12/2017

2.30 P.M - 4.30 P.M.

INSTRUCTIONS:

- Answer ALL Questions in Section A and any other TWO Questions in Section B

SECTION A

QUESTION ONE

Explain the following terms;

- Food plant
- Cleaning
- HACCP
- Food handler
- Primary production

[5 Marks]

QUESTION TWO

Describe the construction requirement of food establishment structure with respect to”

- Building
- Floors

[2 Marks]

[3 Marks]

QUESTION THREE

- Describe the principal plant utilities in a food plant.
- Explain the factors that affect Lentic water quality.

[4 Marks]

[4 Marks]

QUESTION FOUR

Explain five operations that can be used in treatment of food waste water.

[5 Marks]

QUESTION FIVE

Ultraviolet (UV) radiation has been used for years in many industries for inactivation or destruction of microorganisms for disinfection purposes. Explain;

- Four advantages
- Three disadvantages associated with the method.

[4 Marks]

[3 Marks]

SECTION B

QUESTION SIX

Discuss the following common water treatment techniques;

- (i) Filtration and Filtration hazards [10 Marks]
- (ii) Ion exchange processes and hygienic aspects of ion exchange processes [10 Marks]

QUESTION SEVEN

(a) Use a pressure-enthalpy (*P/H*) chart to describe the refrigeration cycle. [12 Marks]

- (b) Describe the important consideration for a ‘food plant’ with respect to;
- (i) Building [2 Marks]
 - (ii) Floor [3 Marks]
 - (iii) Walls, Partitions and Ceiling. [3 Marks]

QUESTION EIGHT

Discuss the handling/treatment of food waste water (plant effluents) [20 Marks]

.....