



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences
Department of Environmental Health Science

DEGREE IN ENVIRONMENTAL HEALTH SCIENCE
SUPPLEMENTARY EXAMINATION PAPER 2018

TITLE OF PAPER : FOOD HYGIENE & PRESERVATION

COURSE CODE : EHM 309

DURATION : 2 HOURS

MARKS : 100

INSTRUCTIONS :

- : READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
- : ANSWER ALL FOUR (4) QUESTIONS.
- : EACH QUESTION **CARRIES 25** MARKS.
- : WRITE NEATLY & CLEARLY
- : NO PAPER SHOULD BE BROUGHT INTO THE EXAMINATION ROOM
- : BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER.

DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR.

Question 1

Define the following terms commonly used in relation to food hygiene;

- | | | |
|----|------------------------|-----|
| a) | D-value | [3] |
| b) | HACCP (write in full) | [2] |
| c) | Z-value | [3] |
| d) | Grease trap | [2] |
| e) | CFU (write in full) | [2] |
| f) | Haloduric microbes | [2] |
| g) | Cryogenic freezing | [2] |
| h) | Quats | [2] |
| i) | Osmoduric | [2] |
| j) | High risk foods | [3] |
| k) | Exotoxins | [2] |
- [25 Marks]**

Question 2

- a) Spices make food to tasteful and they are a darling in most restaurants. Some spices on top of their flavoring properties, also kill gram negative bacteria. Name five of such spices. [5]
- b) Name five reasons for using chemical preservatives in food. [5]
- c). In which foods are these food additives added and why?
- | | | |
|------|------------------------------|-----|
| i) | Butylated Hydroxynisole[BHA] | [3] |
| ii) | Nitrate or nitrite | [4] |
| iii) | Monosodium glutamate[MSG] | [2] |
| iv) | Sodium diacetate | [2] |
| v) | Acetate acid | [2] |
| vi) | Sodium sorbate | [2] |
- [25 Marks]**

Question 3

- a). What good use does ultraviolet (UV) irradiation have in the food establishment and what problems does this method have? [8]
- b). How does (UV) irradiation affect microorganisms in food? [6]
- c). Discuss the effects of pH on food spoilage. [4]
- d) You read a label in a supermarket with name pasteurized milk. What does mean? [7]
- [25 Marks]**

Question 4

- a). How does low or freezing temperature select the type of microorganisms in food spoilage? [7]
- b) Why is it important to blanch vegetables or fruits during canning? [4]
- c) How do the following conditions affect the canning process?
- i) pH of the food [2]
 - ii) Foods high in fats [2]
- d) How does the microwave oven heat food? [5]
- e) Why is freeze dried foods better than dried foods? [5]

[25 Marks]