

EHS447 MAIN EXAM PAPER 2021



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

BSc IN ENVIRONMENTAL HEALTH SCIENCE
FINAL EXAMINATION PAPER 2021
EXAM PAPER

TITLE OF PAPER: **FOOD PRESERVATION**
COURSE CODE: EHS447
DURATION: 2 HOURS
MARKS: 100
INSTRUCTIONS: READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
ANSWER **ANY FOUR** QUESTIONS
EACH QUESTION **CARRIES 25 MARKS**
BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER
WRITE NEATLY AND CLEARLY

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

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QUESTION ONE

1. What factors are necessary to consider, when using or choosing chemical preservatives in food, and why? [10 Marks]
2. Briefly discuss sterilization in food preservation? [5 Marks]
3. Briefly discuss Gamma (γ) radiation in food preservation. [6 Marks]
4. Why is it necessary to preserve food? Give four reasons. [4 Marks]

[25 Total Marks]

QUESTION TWO

1. Why are antioxidants added in food? [6 Marks]
2. Name two food items in which the following preservatives are used and one microorganism they inhibit in the food. [8 Marks]
3. Differentiate between quick freezing and slow freezing. [10 Marks]
4. Smoke chemicals do not have bactericidal and bacteriostatic action. (TRUE/FALSE). [1 Mark]

[25 Total Marks]

QUESTION THREE

1. Discuss the effects of freezing temperature on microorganisms. [10 Marks]
2. Discuss the methylene blue milk test? [7 Marks]
3. List four types of microorganisms that spoil food. [4 Marks]
4. Explain the following food classification and give examples of the foods. [4 Marks]
 - i) Stable foods[durable]
 - ii) Semi-perishable foods

[25 Total Marks]

QUESTION FOUR

1. Name five dangerous microorganisms that may affect cured meat, if it is not handled well. [5 Marks]
2. What are the effects of freezing temperature on food? [10 Marks]
3. Briefly discuss blanching as a thermal food treatment method. [5 Marks]
4. What are the advantages of controlled atmosphere packaging? [3 Marks]
5. Name two categories of preservation methods. [2 Marks]

[25 Total Marks]

QUESTION FIVE

1. Name three friendly bacteria and state their function in food. [3 Marks]
2. Explain the antimicrobial activity of organic acids in food. [10 Marks]
3. There are potential problems related with the use of irradiation on food. What are the effects of irradiation on food? [4 Marks]
4. Discuss the principles of drying in food preservation. [8 Marks]

[25 Total Marks]