INTERNATIONAL UNIVERSITY OF EAST AFRICA
'Learning to Succeed'

FACULTY OF SCIENCE AND TECHNOLOGY

END OF SEMESTER EXAMINATIONS - DECEMBER 2025

PROGRAMME: BSEM
YEAR/SEM: YEAR 3/SEMESTER 1
COURSE CODE: BSE3104
NAME: ENVIRONMENTAL HEALTH

DATE:
TIME:

INSTRUCTIONS TO CANDIDATES:

SECTION A

Answer all questions (40 marks)

Question 1:

a. How does public awareness and education reduce vulnerability to environmental hazards? (5 marks)
b. Define the following terms in environmental health (2 marks each)
i. Vector
ii. Sanitation
iii. Exposure
iv. Air quality
c. Mention at least five hindrances of vector control in your country (5 marks)
d. Examine how climate change can affect water quality and quantity and outline the associated public health implications. (5 marks)
e. Describe how enzymatic activity leads to food spoilage and provide examples of foods highly affected by enzymatic reactions. (5 marks)
f. Differentiate between the following terminologies in environmental health; (3 marks each)
i. Communicable and non-communicable diseases
ii. Food contamination and food spoilage
g. What is cross-contamination of food and how can it be prevented? (6 marks).

Question 2:

a. How does public awareness and education reduce vulnerability to environmental hazards? (6 marks)
b. What role do housing standards play in exposure to environmental hazards? (6 marks)
c. What is cross-contamination of food, and how can it be prevented? (6 marks).
d. Mention at least five hindrances of vector control in your country (5 marks)
e. Differentiate between physical and chemical food spoilage. (4 marks).
f. Examine how climate change can affect water quality and quantity, and outline the associated public health implications (7 marks)
g. The routes of exposure determine how hazards affect the body. Explain. (6 marks)

SECTION B

Attempt any 3 questions from this section (60 marks)

Question 1:

a. Define the term environmental hazard. (2 marks)

b. Describe the various major categories of environmental hazards and provide at least 3 examples under each category. (18 marks)

Question 2:

With examples, differentiate between the following terms as applied to environmental health; (4 marks each)

i. Contamination and pollution

ii. Indoor and outdoor air quality

iii. Risk and hazard

iv. Ingestion and injection

v. Long-term and short-term effects of air pollution

Question 3:

Explain the concept of vulnerability in relation to environmental hazards and discuss the key factors that influence vulnerability. (20 marks)

Question 4:

Using an appropriate case study, explain the relationship between poverty and exposure to environmental hazards. (20 marks)

Question 5:

a. What is food spoilage? (2 marks)

b. Outline the different types of food spoilage (8 marks)

c. How can food spoilage be prevented? (10 marks)

Question 6:

a) What characteristics does a healthy environment possess? (10 marks)

b) How do these characteristics contribute to human health? (10marks)

Question 7:

Certain groups of people are particularly vulnerable to environmental hazards due to their physiological, social, or occupational circumstances. These vulnerabilities can increase the likelihood of exposure to hazards or amplify the effects of exposure. Who are these groups of people and why are they considered vulnerable? (20 marks)

Question 8:

a. What do you understand by the term vector control? (2 marks)

b. Which environmental conditions influence vector survival and how? (18 marks)

Question 9:

a) What do you understand by the term food contamination? (2 marks)
b) What are the major types of food contamination (10 marks)
c) How can food contamination be prevented? (8 marks)

Question 10:

People can get exposed to environmental hazards through various routes, depending on the type of hazard and the environment in which they live or work. With examples, discuss the various routes through which people get exposed to environmental hazards (20 marks)

Question 11:

Explain the major sources of indoor air pollution in low- and middle-income settings and discuss associated health risks. (20 marks)

Question 12:

a. Describe the direct and indirect ways through which climate change affects human health. (10 marks)
b. Describe at least four population groups considered most vulnerable to health impacts of climate change and explain why. (10 marks)