



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF HEALTH SYSTEMS MANAGEMENT AND DEVELOPMENT
BACHELOR OF SCIENCE IN HEALTH SYSTEMS MANAGEMENT AND
DEVELOPMENT
END OF SEMESTER EXAMINATION JANUARY-APRIL 2026

MAIN EXAM

HMD 233 ENVIRONMENTAL HEALTH MANAGEMENT

DATE: 17th April 2026

TIME : Two (2) Hours Start----9:00AM-----End...11:00AM...

INSTRUCTIONS TO CANDIDATES

This exam is out of 70 marks

Section-A is compulsory with a Total of 30 Marks

Answer any TWO (2) questions in Section B

Read carefully the additional instructions preceding each section.

Section-A is compulsory with a Total of 30 Marks

1. State four characteristics of a safe and healthy environment. (4 marks)
2. Outline four health effects of community noise. (4 marks)
3. Several people in a village developed diarrhoea after drinking untreated river water. List four types of water-related disease transmission. (4 Marks)
4. List two advantages of boiling water. (2marks)
5. A town located near a dumping site is experiencing environmental health problems associated with this situation. Identify four problems associated with poor solid waste management (4 Marks)
6. Milk sold in a market caused illness among consumers. List four possible sources of the milk contamination. (4 Marks)
7. Workers in a factory are exposed to chemicals and loud noise. Identify four types of workplace hazards. (4 Marks)
8. A rural area without piped water uses pit latrines. State four problems associated with conservancy systems (4 Marks)

Section B Answer any TWO (2) questions 20 Marks each

9. A **peri-urban community** has been experiencing **frequent outbreaks of Typhoid Fever and Cholera**. Investigation reveals that the **main source of water is a shallow, unprotected well** located near houses and sanitation facilities. The well is open, animals frequently access it, and residents draw water using shared containers. Environmental sanitation in the area is generally poor.

a) As community Health Officer, discuss ten public health risks associated with this situation. (10 Marks)

b) Propose ten comprehensive control measures to prevent future outbreaks. (10 Marks)

10. Workers in a manufacturing plant have recently reported **frequent respiratory problems, physical injuries, and high levels of stress**. An initial inspection shows that the plant produces a large amount of dust and fumes, machinery is poorly guarded, noise levels are high, and employees work long shifts with limited breaks. Personal protective equipment is inconsistently used and there is limited safety training for workers.

As a community Health Officer:

A) Assess ten possible workplace hazards that could be responsible for the workers' health problems. (10 Marks)

B) Recommend ten appropriate control measures using the hierarchy of controls to improve worker safety. (10 Marks)

11. A county hospital has recently been inspected by community health officers and found to have poor medical waste disposal practices. Used needles, contaminated dressings, laboratory waste, and other hospital refuse are mixed with general waste and disposed of in open containers behind the hospital. Waste handlers lack protective equipment and the waste area attracts flies, rodents, and stray animals.

As a community health officer, you are required to investigate and advise the hospital administration.

A) Discuss eight dangers of improper medical waste disposal. (8 Marks)

B) Outline a twelve-point comprehensive hazardous waste management plan for the hospital. (12 Marks)