



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH
MASTER OF PUBLIC HEALTH
END OF SEMESTER EXAMINATION AUGUST 2026

UNIT CODE: MSH 719 **UNIT NAME:** Water, Sanitation, and Hygiene for Schools

DATE: **6TH AUGUST, 2026**

TIME: **3 HOURS**

Start:5:30 PM

Finish:8:30 PM

INSTRUCTIONS

1. This exam is marked out of 100 marks
2. This Examination comprises TWO Sections
 Section A: Compulsory Question (25 marks)
 Section B: Long Answer Questions (75 marks)

SECTION A: COMPULSORY (25 Marks)

Short Answer Questions

1. Identify **five (5)** critical times when learners should wash their hands to prevent disease transmission. (5 marks)
2. Explain **five (5)** differences of waterborne and water washed diseases (5 Marks)
3. Describe **five (5)** biological contaminants of water (5 Marks)
4. Differentiate between protected and unprotected water sources (5 marks)
5. Discuss **five (5)** features of a functional sanitation facility in a school setting. (5 marks)

SECTION B (Set 5 Questions)

ANSWER ANY THREE (3) QUESTIONS (75 Marks)

Long Answer Questions

Question 6 (25 Marks)

A boarding secondary school with 800 students relies on an unprotected river as its main source of water. Recently, several students reported diarrhoeal illness.

- a) Explain **FOUR** WASH-related factors that may have contributed to the outbreak. (8 Marks)
- b) As a Health Officer, propose **FOUR** interventions that should be implemented immediately to prevent further transmission of disease. (8 Marks)
- c) Explain how implementation of these interventions would contribute to achieving SDG 3 and SDG 6. (9 Marks)

Question 7 (25 Marks)

A county health department receives reports that 75 students from a boarding school developed vomiting, diarrhoea, abdominal pain and fever within 24 hours after consuming lunch at the school dining hall.

- a) Using the epidemiological triad, analyze the possible factors that may have contributed to the outbreak. (9 Marks)
- b) Explain the 10 steps you would follow to investigate this outbreak. (16 Marks)

Question 8 (25 Marks)

A newly established mixed day and boarding school in a semi-arid region of Kenya serves 1,200 learners. The school management seeks advice on an appropriate sanitation system.

- a) Assess the suitability of dry conservancy and wet conservancy systems for this school. (10 Marks)
- b) Recommend the most appropriate sanitation technology and justify your choice. (10 Marks)
- c) Explain three public health risks that could arise if the sanitation system is poorly managed. (5 Marks)

Question 9 (25 Marks)

Climate change and population growth are increasingly affecting WASH services in schools.

- a) Discuss **FOUR** ways in which climate change influences water and sanitation systems in school settings. (12 marks)
- c) Propose **FOUR** climate-resilient WASH interventions that can be implemented in schools. (13 marks)

Question 10 (25 Marks)

A laboratory report indicates that water from a school's borehole contains high levels of *E. coli*. The school administration insists that the water appears clear and has no smell.

- a) Interpret the public health significance of finding *E. coli* in a water sample that appears clear and odourless. (5 Marks)
- b) As a Public Health Officer, explain the **TWO** most likely source of contamination in this school setting. (5 Marks)
- b) Discuss the **FIVE** potential health consequences if the water continues to be consumed without treatment. (15 Marks)

