



MACHAKOS UNIVERSITY

University Examinations 2019/2020 Academic year

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN PUBLIC HEALTH.

HPH 210: WATER SUPPLY AND QUALITY CONTROL I

DATE: 26/11/2020

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

This paper consists of two sections A and B

SECTION A

Specific Instructions

- This section has one question
- The question is **COMPULSORY**
- The question is **30 marks**.

QUESTION ONE (30 MARKS)

- a) Define the following terms (3 marks)
- Portable water
 - Well
 - Aquifer
- b) Using a labelled diagram, explain the various sources of water. (3 marks)
- c) Explain how a well can be protected. (3 marks)
- d) Explain the advantages and disadvantages of rain water. (3 marks)
- e) Explain the sources of water pollution with appropriate examples (3 marks)
- f) Highlight the factors that contribute to hardness in water. (3 marks)
- g) Explain water supply options that you would consider for a community in rural Turkana. (3 marks)

- h) State the functions of the water regulatory authority as outlined in the Water Act 2016 of Kenya (3 marks)
- i) Highlight three (3) factors that have led to diminishing fresh water resources (3 marks)
- j) State the challenges faced in achieving sustainable development goal number six (6) in Kenya (3 marks)

SECTION B

Specific Instructions

- **This section has four (4) questions**
- **Answer any two (2) questions**
- **Each question is 20 marks**

QUESTION TWO (20 MARKS)

- a) Water is life but can also be a source of disease. Justify this statement. (10 marks)
- b) As a local public health officer, explain the steps you would take to ensure communities own and sustainably manage a borehole water project. (10 marks)

QUESTION THREE (20 MARKS)

- a) Explain how water may get contaminated at the point of use and suggest methods for preventing such kind of pollution (10 marks)
- b) You are invited to advise a local primary school about rain water harvesting from a roof. Describe the factors that must be considered and the methods of harvesting the rain water. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the effects of water pollution on human health. (10 marks)
- b) During a field trip, you collected a sample of water from River Ganze. Explain the characteristics that you observed. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Explain the challenges faced in the control and prevention of water associated diseases in Kenya. (10 marks)
- b) Explain the role of the public health officer in community water supply. (10 marks)