

**TECHNICAL UNIVERSITY OF MOMBASA**  
**FACULTY OF APPLIED AND HEALTH SCIENCES**  
**DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF**  
**SCIENCE IN COMMUNITY HEALTH**  
**BSCH 15J/YEAR3/ SEMESTER1**  
**APH 4304: WATER AND SANITATION**  
**SEMESTER EXAMINATION**  
**SERIES: APRIL/MAY 2016**  
**TIME: 2 HOURS**

*Instructions to Candidates*

This paper consists of **FIVE** questions

Answer question **ONE (COMPULSORY)** and any other **TWO** questions.

*This paper consists of two printed pages.*

**Question 1**

a) Using relevant examples, define the following concepts;

- i. Surface water **(2 marks)**
- ii. Turbidity **(2 marks)**

b) Outline the parameters to be tested for the water quality under the following categories:

- i. Biological **(2 marks)**
- ii. Chemical **(2 marks)**
- iii. Physical **(2 marks)**

c) Write short notes on the following;

- i. Waterborne diseases **(5 marks)**
- ii. Water quality **(5 marks)**

d) Describe the biological standards for water quality testing and monitoring **(5 marks)**

e) State the importance of water quality testing **(5 marks)**

### **Question 2**

Using relevant examples, discuss the main types of water pollution **(20 marks)**

### **Question 3**

a) Water, sanitation and health are closely related. Discuss **(10 marks)**

b) Discuss the diseases associated with water contamination indicating their source, symptoms and interventions **(10 marks)**

### **Question 4**

Describe the main methods used in water quality testing and monitoring **(10 marks)**

Explain the industrial sewage treatment process **(10 marks)**

### **Question 5**

a) As the chairman of Water Resource Users Association in your area, explain the legal and ethical considerations that you would make in the management of water resources.

**(10 marks)**

b) What challenges are associated with poor management of water resources

**(10 marks)**