



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE  
IN PUBLIC HEALTH**

**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER 2023/2024 ACADEMIC YEAR**

**MAIN CAMPUS**

---

**COURSE CODE: HCB 1206**

**COURSE TITLE: COMMUNITY WATER SUPPLY AND QUALITY CONTROL**

**DATE: STREAM: (BSc. Env. Health)**

**EXAM SESSION:**

**TIME: 2 HOURS**

---

**Instructions:**

- 1. Answer ALL questions in Section A and ANY other TWO questions in Section B**
- 2. Candidates are advised not to write on Question Paper.**

**Candidates must hand in the Answer Booklet to the Invigilator while in the Examination Room**

## **SECTION A [30 MARKS]**

**Answer ALL questions from this Section.**

### **Question one.**

- a) Define the following process of movement of water on the earth surface.
  - a) Condensation
  - b) precipitation
  - c) Infiltration
- b) (6mrks)
- b) Briefly highlight reasons why oceans as a limited source of domestic water. (4mrks)
- c) Name and explain stages involved in treating a highly turbid water in a water treatment plant? (6 marks)
- d) Differentiate between specific yield and specific retention in relation to aquifer characteristics (4 marks)
- e) Highlight water sources for a municipal water supply.(4 marks)
- f) Briefly describe 3 equipment/structures of a water intake for municipal water.(6 marks)

### **Question 2**

- a) Discuss water extraction from ground water through wells.(10 marks)
- b) Discuss the characteristics of an aquifer (10 marks)

### **Question 3**

Discuss treatment process of water from the intake to the distribution reservoirs (consider a fresh water lake) (20 marks)

### **Question 4**

- a) By giving examples discuss biological, physical and chemical parameters of a quality water for a community consumption (10 marks)
- b) Water sources are polluted through human activities, highlight agents of water pollution (10 marks)

### **Question 5**

- a) With an aid of a diagram describe a hydrological cycle.(10 marks)
- b) Discuss 2 key sources of municipal water. (10 mrks)