



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

**UNIVERSITY EXAMINATION FOR DIPLOMA IN COMMUNITY HEALTH AND  
DEVELOPMENT**

**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER 2016/2017 ACADEMIC YEAR**

**KISII CAMPUS – PART TIME**

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**COURSE CODE: HDC 2215**

**COURSE TITLE: COMMUNITY WATER SUPPLY**

**EXAM VENUE:LR 18**

**STREAM: (DIP. CHD)**

**DATE:13/12/16**

**EXAM SESSION:2.00 – 3.30PM**

**TIME: 1 ½ HOURS**

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**Instructions:**

- 1. Answer all questions in section A and any other 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

**SECTION A** (Answer all questions in this section compulsory)

1 Define the following terminologies as they are used in community water supply (2mks)

(i) **hydrologic cycle**

(ii) precipitation

(iii) Percolation

(iv) Infiltration

2 There are some factors that affect water supply selection in any locality List them (2mk)

3 Describe six conditions that may interfere with a continuous or uninterrupted supply of water in any urban market (3mks)

4 Ministry of water engineers have classified water supply into three classifications. Name them (3mks)

5 Water quality deteriorates in the distribution systems due to some factors. List any four such factors (2mks)

6 Describe any two types of water systems that supply water under pressure to consumer consumption and fire protection (2mks)

7 Briefly explain the meaning of a water supply system (3mks)

8 What is **hydrologic cycle as used in community water supply?** (1mk)

9 Mention three critical times to wash hands apart from *before eating, after cleaning patient, after defecating in the latrine, before touching body fluids* (3mks)

10 What are the disadvantages of a family depending on rain water as the only source of water (2mks?)

(b) State any considerations that must be given priority in the design criteria for Potable Water Systems (2mks)

11 Mention the common sources of tap water in Kenya (2mks)

12 (a) Mention four diseases that may be transmitted through water (2mks)

(b) Distinguish between water contamination and water pollution (1mk)

**SECTION B** (*Answer any two questions*)

1 Explain the water treatment process in Kenya commenting on which precautions to be borne in mind in every stage of treatment (15 mks)

2 Water storage facilities, after-water treatment, and the pipe network in a community that transports water from the water storage location(s) to supply point of consumption, constitutes a complex network of entrapped water where uncontrolled chemical and biological reactors can produce significant variations in water quality in both time and space. Explain the primary factors of water quality deterioration in distribution systems in any community water supply system (15mks)

3 (a) A water supply network is a system of engineered hydrologic and hydraulic components which provide water supply in any community. Explain the components a water supply network (10mks)

(b) Briefly describe how to protect a hand dug well (5mks)

4 (a) Describe the procedure you as a Community Health Development Officer may follow to protect an unprotected spring in your area of work. (10mks)

(b) Outline the importance of community participation in protecting a spring (5mks)