



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE**

**PUBLIC HEALTH/COMMUNITY HEALTH AND DEVELOPMENT**

**3<sup>ED</sup> YEAR 1<sup>ST</sup> SEMESTER 2024/2025 ACADEMIC YEAR**

**MAIN/KISUMU CAMPUS**

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**COURSE CODE:**

**HCB 1309**

**COURSE TITLE: COMMUNICABLE DISEASE, CONTROL AND PREVENTION**

**EXAM VENUE: LAB 11**

**STREAM: BSc Public/ Comm. Hlth & Dev**

**DATE: 8/1/25**

**EXAM SESSION: 14-16.00 HRS**

**TIME: 2.00 HOURS**

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**Instructions:**

- 1. Answer all the questions in Section A and 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.**



**Answer all questions in section A – 30 marks.**

1. Airborne transmission may be the dominant form of transmission for several respiratory pathogen.
  - a. Explain **two** mechanisms of transmission involved. *3marks*
  - b. Describe ways of preventing airborne diseases. *3marks*
2. Illustrate using an appropriate example the significance of using combination interventions in communicable disease prevention and control. *3marks*
3. About 60% of emerging infectious diseases that are reported globally are Zoonoses.
  - a. Define zoonosis and provide any three examples of zoonotic diseases. *2marks*
  - b. Highlight **three** mechanisms involved in zoonosis *3marks*
  - c. Explain the significance of prevention and control of zoonotic infections *2marks*
  - d. State the key environmental, ecological, and human factors that contribute to the emergence and re-emergence of zoonotic diseases. *3marks*
2. Describe the public health importance of Emerging infectious diseases (EIDs) *2marks*
3. Explain the “One Health Approach” to Prevent Emergence and Spread of Emerging Zoonoses *3marks*
4. Compare and contrast Prevalence and Incidence as measures of disease burden. *3marks*
5. Describe how measures of disease burden can influence decision-making in public health priority setting. *3marks*

**SECTION B – 40 MARKS**

Answer any two questions – 20 marks each

**Question 1:** Explain mechanisms by which the following interventions help in disease prevention and control.

- a. Health education and promotion *4marks*
- b. Handwashing *4marks*
- c. Screening *4marks*
- d. Prophylaxis *4marks*
- e. Immunization *4marks*

**Question 2:** Communicable diseases have emerged as major public health threat globally. The increasing human vulnerability to and difficulties in controlling communicable diseases indicate their seriousness.

- a. Critically evaluate reasons for the emergence and re-emergence of communicable diseases in Kenya *4marks*
- b. Identify and describe the major public health challenges associated with communicable diseases. *6marks*



- c. Highlight the mechanisms of actions of any **3** communicable disease control responses used in Kenya *3mks*
- d. Using an appropriate example of communicable diseases, describe **3** determinants of its transmission dynamics *3mks*
- e. Explain how knowledge of transmission dynamics of a disease might be useful in guiding public health response *4marks*

**Question 3:** Schistosomiasis is an endemic disease around Lake Victoria.

- a. Discuss the risk factors associated with spread of schistosoma infections. *[6 marks]*
- b. Describe any **three** control approaches and how they are used in Kenya. *[8 marks]*
- c. Describe any **three** social effects of schistosomiasis *[6 marks]*

**Question 4:** About 1.5 billion people, or 24% of the world's population are infected with soil-transmitted helminth infections. The trends and population prevalence are highly varied.

- b. Discuss the public health impacts of soil-transmitted helminth infections particularly in children. Include the consequences of these infections on growth, development, and social well-being. *[12mks]*
- c. Highlight **four** reasons why soil transmitted infections remain endemic in Kenya. *[8mks]*