



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

**UNIVERSITY EXAMINATION FOR DEGREE IN PUBLIC HEALTH/  
COMMUNITY HEALTH AND DEVELOPMENT**

**3<sup>RD</sup> YEAR 1<sup>ST</sup> SEMESTER 2013/2014 ACADEMIC YEAR**

**CENTER: MAIN CAMPUS**

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**COURSE CODE: HCD 3311**  
**COURSE TITLE: CONTROL AND PREVENTION OF COMMUNICABLE AND  
NON COMMUNICABLE DISEASES**  
**EXAM VENUE: STREAM: BSc. Public Health/Community Health & Devt.**  
**DATE: 04/12/2013 EXAM SESSION: 9.00-11.00 AM**

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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 short answer questions – (30 marks)**

1. Distinguish the usage of the following terms in disease control and prevention using appropriate example for each cases (3 marks)
  - a. Communicable diseases
  - b. Contagious diseases
  - c. Non-communicable diseases
  
2. Briefly explain the following characteristics used to describe a causative agent according to the various outcomes they present after exposure to a susceptible host (3 marks)
  - a. Infectivity
  - b. Pathogenicity
  - c. Virulence
  - d. Antigenicity
  
3. List at least 6 tools that are available for the states for control and prevention of infectious diseases? (3 marks)
  
4. A patient can present with one of the following; please demonstrate that you understand how to differentiate the three in knowledge of natural history and spectrum of disease? (3 marks)
  - a. Signs
  - b. Symptoms
  - c. Syndromes
  
5. With examples, briefly describe the concept of “Iceberg of Disease” in control and prevention of diseases (3 marks)
  
6. An infectious agent may be transmitted from its natural reservoir to a susceptible host through different ways, name TWO major mode of transmission as you briefly identify the further classification in each giving relevant examples of each (3 marks)
  
7. Define a disease carrier as you list 5 reasons why they are dangerous to public health disease control and prevention (3 marks)
  
8. Briefly explain the difference between Sufficient component and Necessary component in Component causes and causal pies model by Ken Rothman in 1976 (3 marks)
  
9. Identify 6 pre-disposing factors of Diabetes Mellitus (DM) (3 marks)
  
10. State at least 2 example of each mention level of prevention for Coronary Heart Diseases below (3 marks)
  - a. Primary prevention for CHD

- b. Secondary prevention for CHD
- c. Tertiary prevention for CHD

**SECTION B – Essay Answer Question**

- 11.
- a. Define elaborately the concept “Chain of infection” as used in control and prevention of infectious diseases (5 marks)
  - b. Discuss the six requisites (essentials) of a chain of infection for the perpetuation of communicable diseases giving relevant examples (15 marks)
- 12.
- c. Differentiate the between the following type of infections giving example of each (6 marks)
    - i. Nosocomial infection
    - ii. Zoonotic infection
    - iii. Emerging infection
  - d. Discuss the concept of epidemiological transition (14 marks)
13. A variety of models of disease causation have been proposed to explain why “disease does not just occur random” name two model you know of and discuss one of them using one disease as an example (20 marks)
- 14.
- e. Distinguish between Disease Prevention and Disease Control giving examples of each (3 marks)
  - f. Distinguish between Disease Elimination and Disease Eradication giving examples of each (3 marks)
  - g. With examples, describe four main level of prevention in epidemiology (14 marks)

Good luck!