



**AMREF INTERNATIONAL UNIVERSITY**  
**SCHOOL OF PUBLIC HEALTH**  
**DEPARTMENT OF HEALTH SYSTEM AND DEVELOPMENT**  
**BACHELOR OF SCIENCE IN HEALTH SYSTEM AND DEVELOPMENT**  
**END OF SEMESTER EXAMINATION APRIL 2024**

**UNIT CODE:** HMD 211 COMMUNICABLE AND NON-COMMUNICABLE DISEASES

**DATE:** April 2024

**TIME:** 2 Hours

**Start:** 4:30 PM

**Finish:** 6:30 PM

**INSTRUCTIONS**

1. This exam is marked out of 70 marks
2. This Examination comprises TWO Sections  
**Section A:** Compulsory Question (30 marks)  
**Section B:** Long Answer Questions (70 marks)

**SECTION A: COMPULSORY (30 Marks)**

**QUESTION 1**

a) Match the items on the right with those items on the left, do not repeat an item use (8Marks)

1. Pathogenicity	a. Ability of the organism to stimulate the immune system to produce antibodies or antitoxin with subsequent immunity. Measured by the second attack frequency.
2. Virulence	b. Ability of an infectious agent to produce disease.
3. Dose of Infection (Inoculum)	c. Ability of an infectious agent to produce disease.
4. Dose of Infection (Inoculum)-	d. Ability to produce severe pathological reaction. Measured by the ratio of clinical to subclinical disease and case fatality rate.
5. Viability of the Organism (Resistance)	e. Ability of the organism to live outside the body.
6. Spore Formation	f. Ability to maintain viability for a long period in unfavorable environmental conditions.
7. . Antigenic Power of the Organism	g. . High probability of severe disease with a higher dose of infection.
8. Ease of Communicability-	h. Measured by the secondary attack rate, which is the number of secondary cases occurring within the range of the incubation period following exposure to a primary case expressed as a percentage of susceptible

1	2	3	4	5	6	7	8

b) Name two example of a vector-borne communicable disease and the vectors associated with it. (4 Marks)

c) Outline 6 factors that contribute to the increase of non-communicable diseases. (6 Marks)

- d) Distinguish between type 1 and type 2 diabetes (4 Marks)
- e) Distinguish between primary and secondary hypertension (4 Marks)
- f) Name two types malignant cancers (2 Marks)
- g) Define herd immunity (2Marks)

**SECTION B: ANSWER ANY TWO (2) QUESTIONS (40 Marks)**

**Long Answer Questions**

**QUESTION 2**

As an expert in health systems management, you have been invited to a local village to address an outbreak of Tuberculosis. Discuss preventive and control measures tailored to disrupt different phases of this chain. (20 Marks)

**QUESTION 3**

Discuss the impact of Non-Communicable Diseases on health systems of a developing country. (20 Marks)

**QUESTION 4**

Discuss four communicable diseases that have potential capability of causing pandemic. (20 Marks)