



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL DIPLOMA

IN

ENVIRONMENTAL HEALTH

SUBJECT: Epidemiology

PAPER NO: 605/15/S01

DURATION: 3 Hours

MARCH/APRIL 2023 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer ALL questions in Section A.
2. Answer ANY THREE (3) questions in Section B.

This paper consists of 2 printed pages.

SECTION A

QUESTION 1

Define the following terms

- | | | |
|-----|--------------------|-----------|
| (a) | population at risk | (2 marks) |
| (b) | demography | (2 marks) |
| (c) | stable population | (2 marks) |
| (d) | infectivity | (2 marks) |
| (e) | pathogenicity | (2 marks) |

QUESTION 2

Differentiate between the term prevalence and incidence rate. (10 marks)

QUESTION 3

Explain the following terms:-

- | | | |
|-----|-----------------------------|-----------|
| (a) | natural active immunity | (4 marks) |
| (b) | artificial passive immunity | (4 marks) |
| (c) | artificial active immunity | (4 marks) |
| (d) | natural passive immunity | (4 marks) |
| (e) | herd immunity | (4 marks) |

SECTION B

Answer ANY THREE (3) questions.

QUESTION 4

Describe the four (4) levels of disease prevention. Give examples of action at each level which would be appropriate as part of a comprehensive programme to prevent the spread of Tuberculosis (TB). (20 marks)

QUESTION 5

Discuss the main uses of diseases surveillance in public health. (20 marks)

QUESTION 6

As an environmental health technician, you are asked to undertake a study to assess the microbial quality of well water in village Z. Outline any five (5) data collection tools that you can use to carry out research study. (20 marks)

QUESTION 7

Observational studies can either be case-control or cohort. Give the merits and demerits of the two. (20 marks)

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