

**CHUKA UNIVERSITY**  
**SCHOOL OF NURSING AND PUBLIC HEALTH**  
**JANUARY-APRIL 2025 SEMESTER EXAMINATION**  
**PUHE 811- PRINCIPLES OF EPIDEMIOLOGY**  
**TIME: 3 HOURS**

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**Instructions: Answer All Questions.**

**QUESTION ONE (20 marks)**

- a) A breast cancer screening was conducted in sub-county X. 5000 women were screened for breast cancer of whom 50 were found to have the disease. Two years later 15 more women were found to have cancer of the breast.
  - i. Calculate the point and period prevalence (5 marks)
  - ii. Calculate the attack rate and secondary attack rate (5marks)
- b) A HIV screening test was administered to 10,000 youths aged 18 years.850 youths tested positive and had HIV ,250 tested positive but did not have the disease.150 tested negative but had the disease.
  - i. Calculate the of the screening test (5 marks)
  - ii. Calculate the specificity of the screening test (5 marks)

**QUESTION TWO (20 marks)**

Describe the characteristics of descriptive epidemiology and its importance in health records.

**QUESTION THREE (20 marks)**

Describe the features of the following experimental study designs and their application in health records.

- a) Clinical trials (10 marks)
- b) Field trials (5 marks)
- c) Community trials (5 marks)

**QUESTION FOUR (20 marks)**

Discuss the factors to be considered in completing of the clinical picture of a disease.

**QUESTION FIVE (20 marks)**

- a) Describe the different modes of disease transmission (5 marks)
- b) Describe the factors which influence the causation of communicable diseases (15 marks)

