CHUKA                                                UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD DEGREE OF**

**MASTER OF SCIENCE IN NURSING**

**NUCH 811 :   EPIDEMIOLOGY**

**STREAMS:  Y1 S2**                                              **TIME:  3 HOURS**

**DAY/DATE:  THURSDAY 9/04/2020**                          **11.30 A.M – 2.30 P.M.**

**INSTRUCTIONS:**
1. Do not write anything on the question paper.
2. Mobile phones and any other reference materials are NOT allowed in the examination room.
3. The paper has two sections.  Answer ALL questions in Sections 1 and THREE questions in Section II
4. Number ALL your answers and indicate the order of appearance in the space provided in the cover page of the examination answer booklet.
5. Write your answers legibly and use your time wisely.

**SECTION ONE        [40 MARKS]**

1.   What are the characteristics of a good epidemiologic variable ?                    [6 Marks]

2.  Overtime, an epidemiologic homeostasis may result into the agent, host, and environmental factors reaching an equilibrium.  However, any disturbance in favor of the agent results in an epidemic.  Using suitable examples, discuss the changes related to the agent that can result in epidemics.                    [10 Marks]

3.  Distinguish between the following pairs of terms as used in the study of epidemiology.
                                                                                        [12 Marks]

    i.        Bias and Error
    ii.       Information Bias and selection Bias
    iii.      Case reports and case series
    iv.      Confounding variable and an intervening variable

      v.      Validity and reliability

      vi.     Ratio and proportion

4. A case –control study of 1700 participants studied the association between the exposure of a contraceptive Tamoxifen and uterine cancer.  Out of the exposed group, 139 cases developed cancer. But 58 did not.  In the un-exposed group, 550 developed the disease while 953 did not.  Using a 2x2 table, determine;
   i.       Incident of the disease in the exposed
   ii.     Incidence of the disease in the unexposed
   iii.    Relative risk
   iv.    The odds ratio.
   v.     What does the Odds ratio obtained reveal about the use of Tamoxifen ?


**SECTION II**       **[60 MARKS]**

1. Discuss the major differences between prevalence rates and incidence rates as measures of disease in a population.         [20 Marks]

2. How do Retrospective studies differ from prospective studies? What are the advantages of Retrospective studies over Prospective studies?     [20 Marks]

3. Discuss the process of disease outbreak investigation.     [20 Marks]

4. Discuss the guidelines used for Assessing Causation from Observation Studies.

                                               [20 Marks]