



*(University of Choice)*

**MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS**

**MAIN EXAM**

**2021/2022 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER EXAMINATION**

**FOR THE DEGREE OF BACHELORS OF SCIENCE IN EPIDEMIOLOGY AND  
BIOSTATISTICS**

**COURSE CODE: HEM 226**

**COURSE TITLE: NUTRITIONAL EPIDEMIOLOGY**

**DATE: 21/04/2022**

**TIME: 3.00-5.00 PM**

---

**INSTRUCTIONS TO CANDIDATES:**

**THIS PAPER CONSISTS OF TWO SECTIONS; SECTIONS A AND B. Answer all the questions in Section A and any Two in Section B**

**TIME: 2 Hours**

MMUST observes ZERO tolerance to examination cheating

Paper Consists of 2 Printed Pages. Please Turn Over.

**SECTION A: ATTEMPT ALL THE QUESTIONS IN THIS SESSION (40 MARKS)**

1. Define the following terms (4 marks)
  - a) Macronutrients:
  - b) Spina bifida:
  - c) Placebo:
  - d) Infant mortality:
2. In an outbreak of food borne disease typhoid in Town A in 2010, typhoid was diagnosed in 18 of 152 vaccinated adults compared with 3 of 7 unvaccinated adults. Calculate the risk ratio (4 marks)

|              | Typhoid | Non-case | Total |
|--------------|---------|----------|-------|
| Vaccinated   | 18      | 134      | 152   |
| Unvaccinated | 3       | 4        | 7     |
| Total        | 21      | 138      | 159   |

3. Note down FOUR attributes of a good screening test (4 marks)
4. Differentiate between the following terms (4 marks)
  - a) Nutritional Risk Screening and Mini Nutritional Assessment
  - b) Dietary Supplements and Nutraceuticals
5. Explain four reasons why nutritional assessment is essential (4 marks)
6. Identify FOUR main interventions in tertiary prevention of diseases (4 marks)
7. Development of the literature review requires four stages. Name them. (4 marks)
8. Using examples determine four uses of nutraceuticals in Nutrition (4 marks)
9. Elaborate briefly on the following? (4 marks)
  - a) Biochemical assessment:
  - b) Sociologic assessment:
  - c) Clinical assessment:
  - d) Dietary Review:
10. Tabulate the following table and then calculate sensitivity and positive predictive value (4 marks)

| Screening Results | True Characteristics in population |            | Total |
|-------------------|------------------------------------|------------|-------|
|                   | Disease                            | No disease |       |
| Positive          | 20                                 |            | 53    |
| Negative          | 10                                 | 37         |       |
| Total             |                                    | 70         | 100   |