JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS 2023/2024
YEAR 1 SEMESTER 2 SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN EPIDEMIOLOGY AND BIOSTATISTICS
PEH 3108: MOLECULAR EPIDEMIOLOGY

DATE: MAY/JUNE 2024   TIME: 3 HOURS

INSTRUCTIONS: ANSWER ANY FOUR QUESTIONS

1. Explain the following terminologies applied in molecular epidemiology in the identification of disease pathogens
   a. Discriminatory power (5marks)
   b. Isolate (5 marks)
   c. Strain (5 marks)
   d. Clone (5 marks)
   e. Type (5 marks)

2. Compare and contrast Genomic and Proteomic methods used in molecular epidemiology (25 marks)

3. Develop a molecular epidemiology study design that would determine the distribution of environmental toxicants and its association with susceptibility to occupational disease among Kenyan gold miners. (25 marks)

4. Describe the methods used for detection and their application in the analysis of microbial agents in biological fluids (25 marks)

5. Explain the molecular epidemiological methods you would propose to associate dietary intake with an individual's nutritional status (25 marks)

6. Illustrate the molecular epidemiological methods used in the assessment of hormonal milieu in menstrual cycle complications (25 marks)

END.