



W1-2-60-1-6

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS 2019/2020
EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN EPIDEMIOLOGY
TPH 3105: MOLECULAR EPIDEMIOLOGY

DATE: FEBRUARY, 2020

TIME: 3 HOURS

INSTRUCTIONS: ANSWER ANY FOUR QUESTIONS

QUESTION ONE

Describe molecular typing techniques of bacterial pathogens (25 Marks)

QUESTION TWO

Discuss the applications of IS6110-based strain-typing method in tuberculosis epidemiologic investigations (25 Marks)

QUESTION THREE

Discuss the molecular epidemiology of *E. coli* urinary Tract infection (25 Marks)

QUESTION FOUR

Discuss molecular epidemiology as a translational research in the context of other types of research and public health assessments (25 Marks)

QUESTION FIVE

- (a). Discuss the main steps involved biomarker development (15 Marks)
- (b). Describe the advantages and disadvantages of using biomarkers as indicators of exposure (10 marks)

QUESTION SIX

Discuss the ethical aspects of molecular epidemiology (25 Marks)