



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

..... YEAR SPECIAL/SUPPLEMENTARY FOR

BACHELOR OF SCIENCE IN PUBLIC HEALTH.

HEH 200: INTRODUCTION TO EPIDEMIOLOGY

DATE:

TIME:

INSTRUCTIONS This paper consists of two sections A and B

SECTION A

- This section has one question
- The question is compulsory
- The question is 30 marks

QUESTION ONE (30 MARKS)

- a) State three (3) applications of epidemiology (3 marks)
- b) Differentiate between incidence and prevalence of disease (3 marks)
- c) Briefly explain the factors that need to be considered in interpreting geographical distribution of disease (3 marks)
- d) Describe the limitations of death certificates as a source of information to measure health and disease. (3 marks)
- e) Define the following terms
 - i. Health determinants (1 mark)
 - ii. Health indicators (1 mark)
 - iii. Risk factors (1 mark)
- f) Explain descriptive studies (3 marks)
- g) Explain the occurrence of ecological fallacy in epidemiological studies (3 marks)

- h) Identify the factors that contribute to epidemics (3 marks)
- i) Outline the characteristics of a case control study (3 marks)
- j) Briefly describe personal attributes that contribute to onset of cardiovascular diseases (3 marks)

SECTION B:

- This section has four (4) questions
- Answer any two (2) questions
- Each question is 20 marks

QUESTION TWO (20 MARKS)

- a) Random errors occur due to chance causing inaccurate measurement of association. Discuss the main sources of random errors in epidemiological studies. (10 marks)
- b) A cross sectional study on down syndromes has found an association with birth order. Explain the possible causes of confounding and how this can be avoided (10 marks)

QUESTION THREE (20 MARKS)

Approaches in prevention of disease overlap and merge, yet all the levels are important. In view of this discuss the following levels of disease prevention:

- a) Primary (10 marks)
- b) Secondary (10 marks)

QUESTION FOUR (20 MARKS)

- a) Screening is the process of using tests on a large scale to identify the presence of diseases in apparently healthy people. Discuss the various types of screening and their aims. (10 marks)
- b) Explain the epidemiological triad as a concept of disease occurrence (10 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the various modes of transmission of an infectious disease of your choice (10 marks)
- b) Discuss factors that should be considered before establishing a disease screening programme (10 marks)