



JARAMOGI OGINGA 1ST YEAR 1ST SEMESTER 2020/2021 ACADEMIC YEAR

ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE

(Epidemiology and Disease Control)

SPECIAL EXAMINATIONS NOV. 2020

COURSE CODE: HES 5112

COURSE TITLE: Demography and Population Health

EXAM VENUE: STREAM: MSc

DATE: EXAM SESSION:

TIME: 3.00 HOURS

Instructions:

1. Answer question 1 (Compulsory) and any other three questions
2. Candidates are advised not to write on the question paper.
3. Candidates must hand in their answer booklets to the invigilator while in the examination room.

Answer question ONE (Compulsory) and THREE other questions.

1. Demography is the branch of social sciences concerned with the study of human populations, their size, structure and change, and their relationship with the natural environment. Discuss the relevance of Demographic Characteristics to Public Health Practice (15 Marks).

2. Consider country A with census data at two different points in time.

<u>Date/Year</u>	<u>Population</u>
March 26 th 1947 -	17 694 920
March 26 th 1957 -	20 767 966

Find:

- i. Intercensal growth
- ii. Annual growth
- iii. Arithmetic growth rate
- iv. Geometric growth rate
- v. Exponential growth rate (15 Marks).

3. The Table shows details for population A and B.

Age (years)	Population A		Population B	
	Population size by 1 st July 1989	No. of Deaths 1989	Population size by 1 st July 1989	No. of Deaths 1989
0 – 19	39	4	144	18
20 – 39	27	5	89	19
40 – 59	22	6	51	16
60+	19	8	17	8
Total	107	23	301	61

Find:

- i. Crude Death Rates for population A and population B
- ii. Average Specific Mortality Rates for population A and B.
- iii. Make an inference on mortality indicators calculated in parts a and b (15 Marks).

4. Thomas Robert Malthus was the first political economist to propose a systematic theory of population. By referring to his theory;

i. Highlight the premise of Malthusian theory

ii. Write short notes based on the following: (a) Preventive measures (b) Positive checks

iii. Explain the relevance of the theory to population health globally and locally (15 Marks).

5. Highlight Demographic Data collection methods and explain their advantages as well as shortcomings (15 Marks).

6. (a) Define the following:

i. Cause Specific Mortality Rate

ii. Proportionate Mortality Rate

iii. Abortion Rate

iv. Age Dependency Ratio

(b) The following Demographic Data was drawn from a community in a developed Country. Use it to answer questions that follow.

	Year 1933	Year 1973
Total population	10 500 000	21 400 000
Death from Cancer of the colon	11 056	44 877
Death from all cancers	46 000	180 000

Find:

i. Cause Specific Mortality Rate for each year

ii. Proportionate Mortality Rate for each year (15 Marks)