UGANDAMARTYRS UNIVERSITY
NKOZI

UNIVERSITY EXAMINATIONS
May 2023

FACULTY OF SCIENCE

DEPARTMENT OF MATHEMATICS & STATISTICS

END OF SEMESTER TWO FINAL ASESSMENT
Nkozi

Bsc. Econ & Stat. II, Bsc. Gen.II

Demography & Social Statistics
STA 3202

DATE: **Friday 19/5/2023**

DURATION: 3HRS [2:00 – 5:00 pm]

Instructions:

1. Carefully read through ALL the questions before attempting
2. <u>**ANSWER FOUR (4) Questions**</u>ONLY. (Each question carries equal marks)
3. No **names** should be written anywhere on the examination book.
4. Ensure that your **ID number** is indicated on all pages of the examination answer booklet.
5. Ensure your work is **clear** and **readable**. Untidy work shall be penalized
6. Any type of examination Malpractice will lead to automatic disqualification
7. Do not write anything on the questions paper.

QUESTION 1

(a) Define the following terms.

  (i)   Demography

  (ii)   Social statistics

  (iii) Live birth

  (iv)   Migration

  (v)   Mortality   [05marks] (1 mark @)

b (i) Why do we study demography? [04 marks]

     (ii)   List all sources of demographic data. [04 marks]

(C,) Define the terms Age specific fertility rate (ASFR) and Total fertility rate (TFR). [02 marks]

d) Use the information given in the table below to calculate ASFR and TFR for the country Z in 2020. [10 marks]

Age group (years)	Female population	Birth
15-19	9312000	305413
20-24	9845000	97490
25-29	1749000	9979260
30-34	11166005	895000
35-39	10617000	374644
40-44	8518000	605045
45-45	892060	29900

QUESTION 2

(a) List and describe the basic migration rates [08 marks]

(b) Describe the causes and effects of migration in Uganda [08 marks]

(C,) In population dynamics in any country, three processes can cause the change,

(i) List these changes/ processes[03 marks]

(ii) In February 2020, there are 38.4 millions of people in Country A. In February 2022, the population had reached 39.5 millions of people. Find the change in country's population from 2020 to 2022 and comment on that change. [06 marks]

QUESTION 3

(a) List different measures of fertility [05 marks]

(b) In a country B with the total birth of 75600. [04 marks]

If the country has the total population of 970000 in 2016. Calculate the crude birth rate for that country.

(C,) List all measures of mortality. [06 marks]

(d) In a given country the total number of death is 700,920 and the mid-year [05 marks] population is 19,157,706. Estimate the crude death rate and interpret your findings

(e) Distinguish the difference between complete and bridged life table and show how each can be used. [05 marks]

QUESTION 4

a) List the sources of data on mortality and morbidity [05 marks]

(b) What determines the quality of health services in Uganda? [05 marks]

(c) Describe all the categories of diseases. [04 marks]

(d) Explain how to measure efficiency of health services. [03 marks]

(e) According to the country Z Housing and Census 2014, there were 28.7 million people, growing at a rate of 6.2%. If this rate is assumed to remain constant and assuming the exponential model,

(i) Estimate the time it will take this population to equalize with that of South Africa which was estimated to 85 million people by then. [05 marks]

(ii) How long will it take country Z population to triple in size? [03 marks]

QUESTION 5

(a) List down and explain all types of migration you know [08 marks]

(b) List down all sources of migration data [05 marks]

(C) Distinguish between population dynamics and population projection [02 marks]

(d) Given that in a country Z in 2016, with total population of 23954510 with immigrants of 73890 and emigrants of 488300. Calculate ER, IR, NMR and GMR of a country and interpret your results. [10 marks]

QUESTION 6

(a) List all the sources on education Data in Uganda [05 marks]

(b) Why has the quality of USE (Universal Secondary education) in Uganda not improved? [05 marks]

(C,) Describe the education cycle in Uganda [05 marks]

(d) What are the determinants of quality of education in Uganda? [05 marks]

(e) What determines the demand for services in Education? [05 marks]

END

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