



UNIVERSITY OF ESWATINI

SECOND SEMESTER EXAMINATION PAPER, 2021
FACULTY OF SOCIAL SCIENCES

DEPARTMENT OF STATISTICS AND DEMOGRAPHY

COURSE CODE: DEM101

TITLE OF PAPER: INTRODUCTION TO DEMOGRAPHY

TIME ALLOWED: 2 HOURS

TOTAL MARKS: 75

Instructions

1. Answer question one and any other two questions
2. Show all formulae and workings, where required.

Candidates may complete the front cover of their answer book when instructed by the Chief Invigilator and sign their examination attendance cards but must NOT write anything else until the start of the examination period is announced.

No electronic devices capable of storing and retrieving text, including electronic dictionaries and any form of foreign material may be used while in the examination room.

DO NOT turn examination paper over until instructed to do so.

Question 1 [COMPULSORY]

[25 marks]

a. You are provided with tabulated data for Country A collected from a survey in 1999. You are also told that the total number of rural women in the survey is 10,518 and that the total number of urban women in the survey is 1,334.

- i. Calculate the general fertility rates for rural and urban areas; and [6]
- ii. Calculate total fertility rates for urban and rural areas. [4]

Age group	Percentage (%) of all women in age group		Age-specific fertility rates (per woman)	
	Urban	Rural	Urban	Rural
15-19	9.7	9.4	0.135	0.165
20-24	10.1	7.8	0.268	0.291
25-29	9.0	6.3	0.242	0.273
30-34	6.3	5.3	0.210	0.261
35-39	4.7	4.4	0.149	0.202
40-44	3.0	4.4	0.086	0.123
45-49	1.9	3.1	0.012	0.062

b. Table below gives the numbers of births, deaths of infants under 1 year, and deaths of infants aged under 28 days, in a certain developing country in selected recent calendar years:

- i. Calculate the percentage of infant deaths in each year which were neonatal deaths; [3]
- ii. Calculate the infant mortality rates for each year, and comment on your answers; [5]
- iii. Calculate the neonatal mortality rates for each year, and comment on your answers; and [5]
- iv. Briefly explain four demographic variables that have a great impact on the chances of survival of infants and young children. [2]

Year	Number of Births	Number of deaths	
		At ages under 1 year	At ages under 28 days
1986	755,000	7,180	4,000
1991	792,500	5,820	3,460
1995	732,000	4,520	3,070

Question 2**[25 marks]**

- a. Distinguish between the following concepts:
- i. Fecundity and fecundability; [2]
 - ii. Prevalence and incidence; [2]
 - iii. Rates and probabilities in demography; and [2]
 - iv. Emigration and immigration. [2]
- b. Explain why unlike fertility and mortality, migration is much more complex to define and measure. [8]
- c. Give a precise brief discussion on the following current mortality differentials in developing countries:
- i. Gender; [3]
 - ii. Rural-urban residence; and [3]
 - iii. Marital status. [3]

Question 3**[25 marks]**

Write brief, but concise notes on the impact of migration on health.

Question 4**[25 marks]**

- a. Describe the essential characteristics of the following sources of demographic data:
- i. Censuses; [4]
 - ii. Surveys; [2]
 - iii. Vital statistics systems; and [2]
 - iv. Population registers. [2]
- b. Explain four reasons why vital registration is deficient in developing countries. [4]
- c. State four problems in collecting cause of death data in developing countries. [4]
- d. Distinguish between the following:
- i. Content error and coverage error; [2]
 - ii. De-facto and de-jure population count; and [2]
 - iii. Demographic surveys and health records. [3]

END