

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION 2011

TITLE OF PAPER: INTRODUCTION TO DEMOGRAPHY

COURSE NUMBER: DEM 101

TIME ALLOWED: 2 HOURS

INSTRUCTIONS: ANSWER QUESTION 1 ANY TWO QUESTIONS. ALL QUESTIONS ARE WORTH 20 MARKS EACH.

REQUIREMENTS: CALCULATOR

THIS PAPER SHOULD NOT BE OPENED UNTIL PERMISSION HAS BEEN GIVEN BY THE INVIGILATOR

Question 1(Compulsory)

Using the data below, calculate the following measures and interpret them:

- I. Crude birth rate (4)
- II. General Fertility rate (4)
- III. Total fertility rate (4)
- IV. Infant mortality rate (4)
- V. Maternal mortality rate (4)

Table 1: Mid Year female Population and Live Births by Maternal Age, 1995

Age group	Female Population	Live Births
10-14	17 000	35
15-19	18 000	299
20-24	20 000	3008
25-29	21 000	2814
30-34	19 000	1938
35-39	27 000	1485
40-44	24 000	456
45-49	22 000	159
50-54	20 000	10

Additional information: Total female Population- 300,000
Sex Ratio at Birth – 105
General Sex ratio- 96

Table 2: Maternal and Infant Deaths and Still births, 1995

Maternal deaths	15
Infant deaths	250
Neonatal deaths	136
Early neonatal deaths	116
Still births	220

Question 2

Distinguish fully between the following concepts and measures:

- a) Population structure and population composition (4)
- b) Demography and Population studies (4)
- c) Mortality and morbidity (4)

- d) Epidemic and endemic diseases (4)
- e) Sampling frame and sampling error (4)

Question 3

- a) Give four reasons why age is an important demographic variable. (4)
- b) Based on Annex 1, compute four measures of age structure. (5)
- c) What do these measures indicate about the population? (5)
- d) What is meant by population ageing? Explain why it occurs. (5)

Question 4

- a) List the problems associated with measuring fertility and migration. (8)
- b) What is the difference between life expectancy at birth and lifespan? (4)
- c) What is crude about the crude birth and crude death rates? (4)
- d) Fecundity and Fertility are two different but related concepts. Explain. (4)

Table A: Demographic data for Country X in 1980

Age	Population	
	Males	Females
0-4	580,389	555,536
5-9	605,546	579,333
10-14	717,004	689,056
15-19	803,639	794,932
20-24	737,556	782,390
25-29	690,997	737,379
30-34	649,344	702,495
35-39	526,286	580,621
40-44	446,856	489,456
45-49	433,243	478,268
50-54	469,110	527,492
55-59	456,018	523,352
60-64	382,502	458,505
65-69	312,502	412,020
70-74	229,349	338,557
75-79	153,100	260,457
80-84	88,035	173,764
85+	57,946	135,037
Total	8,339,422	9,218,650

Deaths to Country X residents by age and sex in 1980

Age	Male	Female
<1	1,673	1,321
<5	1,954	1,537
5-9	196	123
10-14	223	145
15-19	936	354
20-24	1,401	453
25-29	1,424	486
30-34	1,441	615
35-39	1,366	736
40-44	1,749	1,047
45-49	2,648	1,606
50-54	4,398	2,767
55-59	6,504	4,083
60-64	8,523	5,655
65-69	10,652	7,545
70-74	11,808	9,594
75+	33,473	46,303
Total	88,710	83,059

Births in Country X by sex of child in 1980 were:

Age	Male	Female
10-14	242	269
15-19	14,244	13,455
20-24	35,618	34,054
25-29	40,530	39,235
30-34	23,904	22,722
35-39	6,907	6,585
40-44	1,065	1,060
45+	51	36