UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER 2009

TITLE OF PAPER: INTRODUCTION TO DEMOGRAPHY

COURSE CODE   :   DEM 101

TIME ALLOWED :   TWO (2) HOURS

INSTRUCTIONS :   ANSWER QUESTION 1 AND **ANY OTHER TWO**
(2) QUESTIONS.

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QUESTION 1 (COMPULSORY)   **(4+4+4+4+4 marks)**

You are provided with the attached data for a certain developed country in 1980 (Table A). In addition, you have the information below for the same year:

Maternal deaths	445
Neonatal deaths	5705
Early neonatal deaths	3800
Post-neonatal deaths	1560
Miscarriages	6580
Still births	8655
Induced abortions	13600

Compute the following measures and interpret them:

    a.   Maternal mortality rate;

    b.   Total fertility rate;

    c.   Infant mortality rate;

    d.   Median age of males at death; and

    e.   Aged-child ratio.

QUESTION 2   **(8+4+4+4 marks)**

    a.   List the problems associated with measuring fertility and migration.

    b.   What is the difference between life expectancy at birth and lifespan?

    c.   What is crude about the crude death rate and the crude birth rate?

    d.   Explain the difference, if any, between the demography and population studies.

QUESTION 3 (6+4+5+5 marks)

Use the following data for Country X to answer the questions below:

DATA FOR COUNTRY X

Population 15-49 in 2000	960,000
Number of women 15-49 in 2000	560,000
Population in 1990	4,000,000
Population in 2000	4,400,000
Births in 1990	200,000
Births in 2000	240,000
Deaths in 1990	80,000
Deaths in 2000	72,000
Births between 1990 and 2000	1,100,000
Deaths between 1990 and 2000	360,000
Girls under age 5 in 2000	400,000
Children under age 5 in 2000	860,000

a.   What happened to the crude rate of natural increase for Country X between 1990 and 2000?

b.   Calculate the general fertility rate for Country X in 2000.

c.   What was the net migration of Country X between 1990 and 2000?

d.   Calculate the annual rate of growth of the population between 1990 and 2000.

QUESTION 4 (4+4+4+4+4 marks)

a.   Why is the general fertility rate a better measure than the crude birth rate?

b.   What is the difference between mobility and migration?

c.   Is there a relationship between sample size and sampling error? Explain.

d.   "Vital registration is conducted to collect demographic data". Do you agree with this statement? Explain.

e.   Fecundity and fecundability are two different but related concepts. Explain.

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Table A: Demographic data for Country X in 1980

Population

Age	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

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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