UNIVERSITY OF SWAZILAND

DEPARTMENT OF STATISTICS AND DEMOGRAPHY

SUPPLEMENTARY EXAMINATION PAPER 2009

COURSE TITLE:	**POPULATION ESTIMATES AND PROJECTIONS**
COURSE CODE:	**DEM 301**
TIME ALLOWED:	**TWO (2) HOURS**
INSTRUCTIONS:	**ANSWER ANY THREE (3) QUESTIONS**
SPECIAL REQUIREMENT:	**CALCULATOR**

QUESTION 1 (10+10 marks)

a. In 1983 the population of a certain country was 1.9 million and in 1995 it was 2.4 million.

i. Estimate the population of the country in 1993.
ii. Estimate the population of the country in 2003.
iii. How many years will it take for this country's population to reach 2.7 million? Use the geometric growth model.

b. Given the data below, estimate the population of Country X in 1999 and 2005 using:

(i) the geometric growth function; and
(ii) the exponential growth function.

POPULATION DATA FOR COUNTRY X

Year	Population (in 000's)
1990	1049
1995	1348

QUESTION 2 (4+6+6+4 marks)

a. What are the differences between population estimates and projections?

b. What are the advantages and disadvantages of mathematical methods of estimation?

c. Why are projections usually prepared for total populations?

d. A population projection is a forecast. Do you agree?

QUESTION 3 (6+6+8 marks)

a. What are the data requirements of the cohort component method?

b. Describe the output of the cohort component method and its limitations.

c. Why is the cohort component method superior to the mathematical methods of projecting populations?

QUESTION 4 (6+8+6 marks)

a. What are the problems of population projection in developing countries?

b. Briefly describe the ratio method of projecting population.

c. What is the difference between the period fertility method and the cohort fertility method?