

**UNIVERSITY OF SWAZILAND**  
**SUPPLEMENTARY EXAMINATION PAPER 2013**

**TITLE OF PAPER: INTRODUCTION TO DEMOGRAPHY**

**COURSE CODE: DEM 101**

**TIME ALLOWED: TWO (2) HOURS**

**INSTRUCTIONS: ANSWER THREE QUESTIONS, ALL ARE WORTH 25 MARKS. QUESTION 1 IS COMPULSORY.**

**REQUIREMENTS: CALCULATOR**

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

**Question 1 (COMPULSORY) [6+5+4+10 marks]**

- a. Describe briefly the balancing equation which relates the number of people in a population at two points in time, define all symbols.
- b. Suppose there were 100,000 forty year olds in a particular population with an age specific growth rate of the population 3% per annum:
  - i. Estimate the number of these forty year olds in five years time, using the exponential growth model.
  - ii. What is the advantage of using the exponential growth model?
- c. What is meant by doubling time? Compute the doubling time for a population growing at 2.9%.
- d. Briefly describe the arithmetic and geometric growth rates.

**Question 2 [5+20 marks]**

- a. What is a population policy?
- b. What is the rationale and objectives of a developing country national population policy using Swaziland as an example?

**Question 3 [5+20 marks]**

- a. What does it mean to have a “young” or “old” population?
- b. How does rapid population growth affect the overall development of a country?

**Question 4 [4+4+4+1+12 marks]**

- a. Write short but comprehensive notes on the following:
  - i. Population census; and,
  - ii. The usefulness of mortality and morbidity statistics.
- b. What are ratios, proportions, probabilities and rates?
- c. What is the importance of age-sex structure of a population?
- d. Describe a population pyramid, how it is constructed, and the factors that determine its shape.