UNIVERSITY OF SWAZILAND

DEPARTMENT OF STATISTICS AND DEMOGRAPHY

SUPPLEMENTARY/RE-SIT EXAMINATION 2016

TITLE OF PAPER   :   INTRODUCTION TO DEMOGRAPHY

COURSE CODE   :   DEM 101/102

TIME ALLOWED   :   TWO (2) HOURS

INSTRUCTIONS
a) ANSWER THREE QUESTIONS. QUESTIONS 1 & 2 ARE COMPULSORY
b) SHOW ALL YOUR WORKING AND FORMULAE WHERE APPLICABLE
c) EXPRESS YOUR ESSAY ANSWERS IN BULLET POINTS

REQUIREMENTS   :   CALCULATOR

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

Question 1 (COMPULSORY) [25 marks]

a. Describe briefly the demographic balancing or accounting equation which relates the number of people in a population at two points in time, define all symbols. [6]

b. Suppose there were 50,200 30-year olds in a particular population with an age specific growth rate of the population 2.3% per year:
   i.   Using the exponential growth rate, estimate the number of these 30-year olds in three years' time. [3]
   ii. What is the advantage of using choosing the exponential growth model? [2]

c. What is meant by quadrupling time? Compute the quadrupling time for a population growing at 2.9%. [4]

d. Write brief notes on the i) arithmetic and ii) geometric growth rates. [10]

Question 2 (COMPULSORY) [25 marks]

Difficulties are encountered in developing countries in collecting reliable and complete data on the following two items:

i.   age of females and males; and,
ii. number of births and deaths.

For all of the above **TWO** items:

a) Suggest reasons why the difficulties are encountered; and, [10+10]

b) Discuss the ways of collecting data that would improve the results. [5]

Answer

Question 3 [25 marks]

a. What are ratios, proportions, probabilities and rates? [8]

b. What is the importance of age-sex structure of a population? [2]

c. Describe a population pyramid, how it is constructed, and the factors that determine its shape. [15]

OR

Question 4 [25 marks]

a. Discuss five health care implications of population growth in developing countries [10]

b. Explain any five factors that affect mortality rates in developing countries. [10]

c. What are the problems for migration in its measurement in African countries? [5]