UNIVERSITY OF SWAZILAND

DEPARTMENT OF STATISTICS AND DEMOGRAPHY

RE-SIT EXAMINATION 2018

TITLE OF PAPER	:	INTRODUCTION TO DEMOGRAPHY
COURSE CODE	:	DEM 102
TIME ALLOWED	:	TWO (2) HOURS
INSTRUCTIONS	:	ANSWER ALL QUESTIONS; SHOW ALL YOUR WORKINGS WHERE APPLICABLE.
REQUIREMENTS	:	CALCULATOR

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

Question 1   [25 marks]

a. Give four reasons why age is an important demographic variable.   [4]
b. Briefly explain what is meant by the following two terms: [4]
    i. Age heaping
    ii. Age shifting
c. Compare and contrast each pair of concepts listed below:
    i. Coverage errors and content errors;   [2]
    ii. Old population and young population;   [2]
    iii. De jure census and De facto census; and   [2]
    iv. Prospective surveys and retrospective surveys.   [2]
d. Describe three problems of particular relevance to Africa in setting up and maintaining a countrywide civil registration system.   [3]
e. Explain four problems associated with measuring migration.   [4]
f. Outline the essential features of a population register.   [2]

Question 2   [25 marks]

a. The data in table below relate to a certain African country. They come from a large-sample survey of the population of the country which took place in 1992. You are also told that the total number of urban women in the survey is 1,334 and that the total number of rural women in the survey is 10,518.

i. Calculate the general fertility rates for rural and urban areas; and   [6]
ii. Calculate total fertility rates for urban and rural areas.   [4]

Age group	Per cent (%) of all women in age group		Age-specific fertility rates (per woman)	
	Urban	Rural	Urban	Rural
15-19	9.7	9.4	0.135	0.165
20-24	10.1	7.8	0.268	0.291
25-29	9	6.3	0.242	0.273
30-34	6.3	5.3	0.210	0.261
35-39	4.7	4.4	0.149	0.202
40-44	3.0	4.4	0.086	0.123
45-49	1.9	3.1	0.012	0.062

b. Table below gives the numbers of births, deaths of infants under 1 year, and deaths of infants aged under 28 days, in a certain developing country in selected recent calendar years:

i. Calculate the percentage of infant deaths in each year which were neonatal deaths; [3]

ii. Calculate the infant mortality rates for each year, and comment on your answers; [5]

iii. Calculate the neonatal mortality rates for each year, and comment on your answers; and [5]

iv. Briefly explain four demographic variables that have a great impact on the chances of survival of infants and young children. [2]

|		Number of deaths	
Year	Number of Births	At ages under 1 year	At ages under 28 days
1986	755,000	7,180	4,000
1991	792,500	5,820	3,460
1995	732,000	4,520	3,070

Question 3 [25 marks]

a. Using information from the table below for a certain region in country A, answer the following questions, using the geometric growth formula for 2a(iii)-(vi):

Year	Mid-year population
1980	3712
1990	4521
2000	5213
2010	6167

i. What was the relative per cent change in the region of country A in **each** decade? [3]

ii. Calculate the average annual numerical increase in the population in each decade. [3]

iii. Calculate the average annual growth rate in per cent in each decade. [3]

iv. Using your answers in part iii), how long would the population in the region of country A take to triple for each decade? [3]

v. What assumption(s) are you to making to reach your answer in part (iv)? [3]

vi. Using the average growth rate from (iii), estimate the year in which the population reached 2.5 million. [2]

b. The figure given below belongs to a population of a country B.
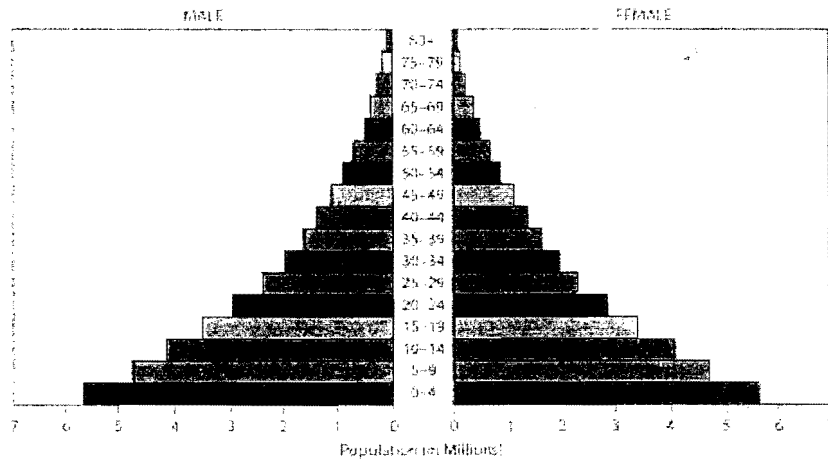
i. Interpret fully the figure above for Country B. [4]
ii. State two measures of population composition and write their respective formula. [4]