UNIVERSITY OF SWAZILAND

DEPARTMENT OF STATISTICS AND DEMOGRAPHY

MAIN EXAMINATION 2017:

HEALTH SCIENCES STREAM

TITLE OF PAPER : INTRODUCTION TO DEMOGRAPHY

COURSE CODE : DEM 101

TIME ALLOWED : TWO (2) HOURS

INSTRUCTIONS : ANSWER QUESTIONS 1 AND 2 AND EITHER
QUESTION 3 OR 4;
SHOW ALL YOUR WORKINGS WHERE
APPLICABLE.

REQUIREMENTS : CALCULATOR

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

Question 1 (COMPULSORY)   [25 marks]

Please read the following paragraph carefully:

Country A has a land area of 2,941,526 square kilometres. In mid-1981 it had a population of 10,508,186 persons which increased to 11,550,462 persons by middle of 1986. About 22.65% of the 1981-1986 increase was due to net migration. Between 1 January and 31 December 1986, a total of 222,626 babies were born, of whom 50.98% were male babies. Around 6.74% of the 1986 population consisted of females in the age group 20 to 29 years who had borne 61.58% of the babies born during 1986. In the same year 102,703 persons died of whom 2,394 died due to tuberculosis.

Using the above data on country A, calculate the following:

i.	Crude birth rate in 1986;	[3]
ii.	Crude death rate in 1986;	[3]
iii.	Population density in 1986;	[3]
iv.	Sex ratio in 1986;	[4]
v.	The increase in population between 1981 and 1986 due to net migration;	[2]
vi.	The proportion of deaths which occurred in 1986 which were due to tuberculosis;	[3]
vii.	The age specific birth rate for women aged 20-29 years in 1986; and	[3]
viii.	The average annual population growth rate between 1981 and 1986, using the exponential growth model.	[4]

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. Discuss five health care implications of population growth in developing countries [15]
b. Explain in brief the following demographic variable impact on the chances of survival of infants and young children: [10]
    i) The age of the mother at the time of birth.
    ii) The Child's birth order.
    iii) Birth interval.
    iv) The child's sex.
    v) Breastfeeding.

OR

Question 4 [25 marks]

a. Distinguish between the following concepts:
    i.   Incidence and prevalence; [2]
    ii.   Fecundity and fertility [2]
    iii.   Rates and probabilities in demography; and [2]
    iv.   Emigrant and immigrant. [2]
b. Explain why migration is such a complex population dynamic which is difficult to define and measure. [8]
c. Give a precise brief discussion on the following current mortality differentials in developing countries:
    i.   Occupation; [3]
    ii.   Rural-urban residence; and [3]
    iii.   Education. [3]