UNIVERSITY OF ESWATINI

DEPARTMENT OF STATISTICS AND DEMOGRAPHY

MAIN EXAMINATION 2019

TITLE OF PAPER : DEMOGRAPHY OF ESWATINI

COURSE CODE : DEM 312/302

TIME ALLOWED : TWO (2) HOURS

INSTRUCTION : ANSWER QUESTIONS 1 AND 2 AND EITHER QUESTION 3 OR 4

REQUIREMENT : SCIENTIFIC CALCULATOR

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Question 1 [COMPULSORY]   [25 marks]

a. What are the factors that influence population distribution?   [5]

Table 1.1: Population Distribution by Age and Sex, Eswatini, 2007-2017

Cohort Age 2007	Cohort age in 2017	Population in 2007 aged 5+	Population 2017	Forward survival ratios	Estimated survivors at end of period	Estimated net migration by at end of peric
0-4	5-9	64 092	64719	____	____	____
5-9	10-14	68 420	63654	____	____	____
10-14	15-19	70 541	5921 3	____	____	____
15-19	20-24	66 203	54236	____	____	____
20-24	25-29	60 035	50188	____	____	____
25-29	30-34	46 552	44222	____	____	____
30-34	35-39	32 623	33538	____	____	____
35-39	40-44	27 425	25268	____	____	____
40-44	45-49	22 314	22084	____	____	____
45-49	50-54	18 992	18724	____	____	____
50-54	55-59	14 240	15754	____	____	____
55-59	60-64	11 022	12810	____	____	____
60+	65+	22955	30150	____	____	____

Based on the data in table 1.1 calculate the following:

b. Employing the census survival ratios and the forward survival method, calculate the age specific net inter census migration for Eswatini female population at ages 5-9 to 65+ in 2017.Assume that the population is closed to external migration.   [15]

c. Under what circumstances can census survival ratios exceed 1?   [2]

d. When is the reverse survival method most likely to produce estimates higher than those from the forward survival method?   [3]

Question 2 [COMPULSORY]   [25 marks]

a. State the goals of family planning for individuals and couples in Eswatini, give examples of the contraceptive method that can be used for each goal   [6]

b. Briefly describe the factors that influence the choice of contraception method   [6]

Table 2.1: Population Distribution by Age and Sex, Eswatini, 2017

Age group	Population 2017	Males	Females
0-4	130208	65218	64990
5-9	129828	65109	64719
10-14	127437	63783	63654
15-19	120 168	60955	59213
20-24	106 516	52280	54236
25-29	96 739	46551	50188
30-34	86 370	42148	44222
35-39	66 981	33443	33538
40-44	49 696	24428	25268
45-49	41 278	19194	22084
50-54	32 818	14094	18724
55-59	27 816	12062	15754
60-64	22869	10037	12810
65-69	17359	7322	10059
70-74	13254	4998	8256
75-80	9148	3484	5664
80+	9034	2846	6193
Not stated	5714	3137	2577
Total	1093238	531111	562127

a. Using table 2.1 above answer the following questions:

i. Calculate and interpret any four measures that can be used to describe the age sex composition for Eswatini   [8]

ii. Based on your results above discuss the socio-economic implications of the Eswatini age-sex structure   [5]

ANSWER

Question 3 [25 marks]

a. Describe the general pattern of HIV prevalence in Eswatini by age and sex [7]

b. Discuss the differences in HIV prevalence by regions [6]

c. Discuss the numerous factors that contribute to the spread of HIV in Eswatini and suggest practical ways of reducing the spread of the pandemic. [12]

OR

Question 4 [25 marks]

The table below shows the area size in square kilometres (sq.km) and population of the four regions at Eswatini obtained from the 2007 census and 2017 census.

Table 4.1: Area size and population in four regions of Eswatini in 2007-2017

Region	Area size (sq. km)	Census 2007	Census 2017
Hhohho	3619.4	282 734	320 651
Manzini	4107.85	319 530	355 945
Shiselweni	3784.5	208 454	204 111
Lubombo	5838.3	207 731	212 531

Based on table 4.1:

a. Calculate the percentage population distribution of each region in 2017. [4]

b. Calculate the population density of each region in 2007 and 2017. Express the answers in terms of population per square kilometres or per square mile. Comment briefly on your answer [8]

c. Calculate the annual geometric growth rate of each region between 2007 and 2017. [4]

d. Using table 4.1 calculate and interpret the following
   i. Index of redistribution from 2007 to 2017 [6]
   ii. Identify three (3) disadvantages of the index of redistribution [3]