UNIVERSITY OF SWAZILAND

DEPARTMENT OF STATISTICS AND DEMOGRAPHY

FINAL EXAMINATION PAPER

COURSE TITLE :	**POPULATION ESTIMATES AND PROJECTIONS**
COURSE CODE :	**DEM 301**
TIME ALLOWED :	**TWO (2) HOURS**
INSTRUCTIONS :	**ANSWER ANY THREE(3) QUESTIONS**

QUESTION 1

a) Discuss the needs for National Population Projections (12)

b) What are variants Population Projections (5)

c) Briefly discuss the uses of variants (5)

d) What are short term, middle range and long range projections and in what circumstances are these projections used (12)

QUESTION 2

a) Discuss each of the following curves stating their advantages, disadvantages and suitability in population estimates

i) arithmetic growth curve (7)
ii) geometric growth curve (7)
iii) exponential (7)
iv) logistic curve (7)

b) The Component Method of population estimation tends to be unsuitable for use in Developing countries. Explain why. (5)

QUESTION 3

Outline the computational procedure in the following methods

a) Census - Cohort Change Method (18)
b) Period Fertility Method (15)

QUESTION 4

a) What are the major advantages of the arithmetic progression model. Discuss any three (9)

b) What are Post Censal Estimates (6)

c) Given the population of Swaziland during the following years, Estimate the population in 2007,

30th June 1976	494 534
30th June 1986	681 058
30th June 1997	929 718

(i) the geometric progression curve (9
(ii) the exponential curve (9)

QUESTION 5

Using the projected female population of Swaziland (2002) and the assumed Net International Migration Rates (NIMR),

(a) Estimate the female population in 2002 with the effects of international migration (25

Age Group	Projected Female Population (2002)	Net International Migration Rates
0-4	81 377	-0.0043
5-9	66 965	-0.0045
10-14	70 188	-0.0051
15-19	69 042	-0.0018
20-24	56 911	-0.0078
25-29	45 269	-0.0445
30-34	36 822	-0.0369
35-39	29 183	-0.0306
40-44	25 233	-0.0243
45-49	18 519	-0.0144
50-54	15 103	0.0120
55-59	11 721	0.0110
60-64	8 357	0.0090
65-69	6 548	0.0020
70-74	4 383	0.0010
75-79	3 064	0.0016
80+	3 785	0.0016

(b) What are Person years lived and how do they differ from the Mid-term interval (8)