NATIONAL UNIVERSITY OF LESOTHO

URBAN AND REGIONAL PLANNING/B Sc. HUMAN GEOGRAPHY
SUPPLEMENTARY EXAMINATION

GES 4535: POPULATION GEOGRAPHY

JULY 2023 MARKS: 100 TIME: 3 HOURS

INSTRUCTIONS: Answer any four questions. Where necessary illustrate your answers with the use of diagrams.

Question 1

Child/Woman Ratio is one measures of population structures important in spatial planning. Describe the following:

(a) Describe any three advantages of Child/Woman ratio measure. [12]
(b) Describe any two disadvantages of the measure. [8]
(c) In what way can Planners interpret the measure. [5]
[25]

Question 2

(a) Give a brief description on Choropleth Maps. (The description should include what the map shows and examples of common choropleth maps) [6]
(b) Outline the five steps followed in construction of Choropleth Maps. [10]
(c) List any three advantages of Choropleth maps. [9]
[25]

Question 3

Censuses provide information that vital in determining the needs of different segments of the population. As a result, planners use it for several planning decisions.

For each of the following Census Information, provide one (1) possible/potential spatial planning-related use.

(a) Total Population Size [5]
(b) Occupation and labour force participation. [5]
(c) Educational Attainment and Literacy [5]
(d) Living quarters characteristics [5]
(e) Location of Residence and Places of Prior Residence [5]
[25]

Question 4

Table 4.1 Life Table for Males in Urban Colombia,

Age Interval	hmx	hqx	lx	hdx	hLx	Tx	ex
0-1	0.0275	0.025485	100,000	2,549	98,155		
1-5	0.0015	0.005848		570	388,305		
5-10	0.0006						
10-15	0.0007						
15-20	0.0037						
20-25	0.0059						
25-30	0.0056						
30-35	0.0052						
35-40	0.0055						
40-45	0.0054						
45-50	0.0067						
50-55	0.0088						
55-60	0.0139						
60-65	0.0213						
65-70	0.0338						
70-75	0.0514						
75-80	0.0781						
80-85	0.1129						
85+	0.1593	1.000000	15,681	15,681	98,347	98,347	6.3

Use Table 4.1 to answer questions (a) – (c)

(a) Use the computed age-specific mortality rates to determine probabilities of dying *h***q***x* for males aged 10-15 to 25-30. [4]

(b) Calculate hdx for ages 30-35 -40-45 [3]

(c) Determine the average number of years of life remaining at beginning of age interval (**e***x*) for males aged 10-15 and 30-35 [8]

(d) Briefly explain any three major applications of the lifetables. [6]

(e) List any two important information is conveyed by the lifetable? [4]

(25)

Question 5

Table 5.1 Population Visible Minorities in Winnipeg

Neighbourhood	**Total population**	**Visible minority population**	**Filipino**		**Black**		**Chinese**	
			2006		2006		2006	
Agassiz	425	40	10		10		0	
Airport	205	0	0		0		0	
Alpine Place	3515	360	40		85		15	
Amber Trails	2135	1040	450		0		15	
Archwood	780	55	0		30		15	
Armstrong Point	360	0	0		0		0	
Beaumont	2360	295	45		40		10	
Betsworth	4220	170	15		0		10	
Birchwood	1890	155	90		0		10	
Booth	5485	335	15		55		10	
Broadway	5080	1370	360		440		80	
Brockville	705	15	0		0		0	
Brocklands	2255	395	330		15		0	
Bruce Park	2165	80	10		20		10	
Buchannan	2820	140	10		45		20	
Burrows-Keevatin	2760	610	445		75		0	
Burrows-Central	4805	1690	1255		55		65	
Canterbury Park	5419	380	135		70		35	
Centrennial	2225	645	230		210		115	
Central Park	3555	1910	490		710		165	
Central River Heights	3145	240	45		25		40	
Central St. Boniface	6215	725	140		375		40	
Chalmers	9475	1295	225		480		90	
China Town	605	460	0		0		415	
City of Winnipeg	**625600**	**101875**	**36815**		**14185**		**12635**	

(a) Use the information on Table 5.1 to compute the location quotients for the Filipino, Black and Chinese minorities in
    a. Beaumont [5]
    b. Burrows Central [5]
    c. Centrennial [5]
(b) Interpret the results obtained in (a). [5]
(c) If you were a city planner in Winnepeg, how would you advice the Government in relation to allocation of resources in the three neighbourhoods. [5]

[25]

Question 6

Table 6.1

Point	***X*i**	***Y*i**
A	2.8	1.5
B	1.6	3.8
C	3.5	3.3
D	4.4	2.0
E	4.3	1.1
F	5.2	2.4
G	4.9	3.5

(a) Use Table 6.1 to compute the x and y coordinates of the centroid. [5]

(b) Compute standard distance deviation for the data [5]

(c) Plot and appropriately label the centroid computed in (a) above. [3]

Table 6.2

Point	***X*i**	***Y*i**	***Weight***
1	100	100	80
2	100	150	170
3	150	150	300
4	150	200	190
5	200	200	450

(d) Use Table 6.2 to calculate the weighted mean centre. [5]

(e) Name and provide a brief description of any measure of geographic distribution that can be used to identify the extent to which features are concentrated or dispersed around the geometric mean centre. The description should include the manner in which the measure should be interpreted. [7]

[25]