



PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

DEPARTMENT OF ARCHITECTURE, PLANNING AND CONSTRUCTION

QUALIFICATION: BACHELOR OF TOWN AND REGIONAL PLANNING	
QUALIFICATION CODE: 07BTAR	NQF LEVEL: 6
COURSE CODE: DPS610S	COURSE NAME: DEMOGRAPHY AND POPULATION STUDIES
DATE: JUNE 2024	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER	Ms. J. Kohima
MODERATOR	Dr. E. Yankson

NOTES:
<ol style="list-style-type: none">1. Read the entire question paper before answering the questions.2. You must answer all questions.3. Ensure you number your answers correctly.4. Please write clearly and legibly.5. Ensure your Student Number is on the Examination Book(s).

THIS QUESTION PAPER CONSISTS OF 5 PAGES (Including this front page)

Question 1

- (a) A way of looking at changes in population composition is through population pyramids. Differentiate between constrictive and expansive population pyramids by providing pyramid sketches. (10)
- (b) Census and surveys are two sources of demographic data. Formulate a table comparing census to surveys. (10)
- [20]**
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Question 2

The central government has availed some funds for mass land servicing. However, budgetary constraints allow these funds to be allocated only to one of the towns listed in Table 1 below, being the town with the highest population growth rate. Therefore, study Table 1 below and answer the proceeding questions.

Table 1: Total Population Size

Town	Year 2011	Year 2016
Town A	86,856	97,865
Town B	79,507	87,186
Town C	245,446	255,510

- (a) In accordance with the central government's funding criteria and population geometric growth rate, indicate the formula you will use to determine which town should be allocated with those funds. (2)
- (b) Using the formula, you indicated in Question 2(a) above and the data in Table 1 above, demonstrate the population geometric growth rates in percentages, for the towns outlined in Table 1. Please show all calculation steps and round off the geometric growth rate percentages to one decimal point. (9)
- (c) Based on the population geometric growth rate percentages you demonstrated in Question 2(b) above and the central government's allocation criteria, determine the town that should be allocated the funds for mass land servicing. (1)
- (d) Population projections help stakeholders to plan for the near and distant future. Using the geometric extrapolation model and geometric growth rate you provided in Question 2(b), project the population size of Town B in 2025. (3)

[15]

Question 3

- (a) It is important to analyse the population or demographic profile of an area during the planning process. In seven brief statements, explain why it is essential for urban planners in the public sector to consider population analyses. (7)
- (b) Businesses use population and demographic data to identify profitable locations for goods and services. Pinpoint three ways through which the private sector can identify profitable locations for goods and services. (3)
- (c) You have been appointed as a Public Health Planner at the Ministry of Health and Social Services. Discuss the steps that you will follow to ensure that health facilities are equitably allocated in Region X. (10)
- (d) Data forecasts, including population projections, are used in the planning process and in the location of various public facilities. Explain briefly why it is difficult to investigate professional ethics in planning data forecasts. (4)
- (e) Population projections can be classified into objective and subjective projections. Distinguish between objective and subjective projections, by offering three facts about each projection. (6)

[30]**Question 4**

- (a) Crude Birth Rate (CBR) is the number of births occurring in a population in a year per 1,000 persons. Pinpoint two (2) disadvantages of using Crude Birth Rate. (2)
- (b) A funeral director would like to establish a crematorium in one of the two cities in your region. Using the data in Table 2 below and the mortality measure that considers all deaths, motivate through calculations, which city in Table 2 below should be considered as a suitable location for the proposed crematorium. Please show the formula and round off your answers to the nearest whole number. (10)

Table 2: Population and Reported Births and Deaths in Cities 1 and 2

Region	Population	Total Deaths	Male Deaths	Female Deaths
City 1	74,629	1,454	922	532
City 2	249,885	2,859	1,677	1,182

[12]

Question 5

Your regional council is provided with funding for a proposed health centre, offering services for adolescent mothers. One of the funding conditions stipulates that the funds be allocated to a town within your region with the Age Specific Fertility Rate (among adolescent mothers) of 50 and above. Your regional governor has instructed you to carry out an assessment of the best location for the proposed health centre within your region. Using the data in Table 2 below and the aforesaid funding condition, answer the questions proceeding Table 2.

Table 2: Number of Women and Live Births to Women, in 15-24 Age Groups in Towns A-C

Town	Age Group	Women in Age Group	Live Births to Women in Age Group
Town A	15-19	9,906,365	952,013
	20-24	10,427,161	483,401
Town B	15-19	11,475,863	104,644
	20-24	11,372,141	6,546
Town C	15-19	10,240,239	414,406
	20-24	10,150,079	1,040,399

- (a) Based on the data in Table 2 and the Age Specific Fertility Rate perspective, demonstrate the calculations that are required to be undertaken before making a decision on the suitable town for the proposed health centre. Please show the formulas and all calculations and round off your answers to the nearest whole number. (11)
- (b) In accordance with your calculations in Question 3(a) above, decide which town should be provided with the funds for the proposed health centre. (1)

[12]

Question 6

- (a) Migration measures compare one's state of birth with one's place of residence at the time of enumeration. Identify five migration measures. (5)
- (b) Migration efficiency is the area's net migration or gross migration. City X has a positive efficient migration while City Y has a negative efficient migration. Based on the aforementioned migration efficiencies of Cities X and Y, compare Cities X to Y by providing three statements about each city. (6)

[11]

TOTAL MARKS = 100