

**UNIVERSITY OF ESWATINI  
DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE AND PLANNING  
RE-SIT EXAMINATION, JULY 2019**

**B.A., B.Ed., B.Sc., BASS, JMC 3 (FT)**

**TITLE OF PAPER: INTRODUCTION TO THE HUMAN ENVIRONMENT**

**COURSE NUMBER: GEP112**

**TIME ALLOWED: THREE (3) HOURS**

**INSTRUCTIONS: THIS PAPER IS DIVIDED INTO TWO SECTIONS**

**SECTION A: TECHNIQUES AND SKILLS**

- 1. ANSWER ALL QUESTIONS (COMPULSORY)**
- 2. THIS SECTION CARRIES 40 MARKS**

**SECTION B: SHORT ANSWERS / ESSAYS**

- 1. ANSWER ANY TWO QUESTIONS**
- 2. EACH QUESTION CARRIES 30 MARKS**

**SPECIAL REQUIREMENTS: Graph paper**

**THIS QUESTION PAPER SHOULD NOT BE OPENED UNTIL PERMISSION IS  
GRANTED BY THE INVIGILATOR**

**GEP112: INTRODUCTION TO THE HUMAN ENVIRONMENT - JULY 2019****SECTION A: TECHNIQUES AND SKILLS (40 MARKS)****COMPULSORY****QUESTION 1**

a) Define the following terms.

- |                          |          |
|--------------------------|----------|
| i) Dependent variable    | (1 mark) |
| ii) Total fertility rate | (1 mark) |
| iii) Crude birth rate    | (1 mark) |
| iv) Dependency ratio.    | (1 mark) |

b) List any three factors which may cause population change. (3 marks)

c) As of 1 January 2019, the population of Swaziland (Eswatini) was estimated to be 1,357,161 people. This is an increase of 1.51 % (20,228 people) compared to population of 1,336,933 the year before. In 2018 the natural increase was positive, as the number of births exceeded the number of deaths by 21,525. Due to external migration, the population declined by 1,297. The sex ratio of the total population was 0.970 (970 males per 1 000 females) which is lower than the global sex ratio. The global sex ratio in the world was approximately 1 016 males to 1 000 females as of 2018.

Below are the key figures for Eswatini population in 2018:

- 40,429 live births
- 18,904 deaths
- Natural increase: 21,525 people
- Net migration: -1,297 people
- 668,247 males as of 31 December 2018
- 688,914 females as of 31 December 2018
- Total area: 17 364 square kilometers.

Source: <https://countrymeters.info/en/swaziland>

- |   |           |
|---|-----------|
| i) Calculate the population density of Eswatini in 2018.  | (3 marks) |
| ii) Calculate the crude birth rate for the country in 2018.   | (3 marks) |
| iii) Given that the infant mortality rate in 2018 was 46 deaths per 1000 live births, how many infants died in the country in 2018?                                       | (3 marks) |
| iv) With the 2018 population of the country as well as the 2018 growth rate, estimate what the population for the Kingdom of Eswatini would be in the year 2022 and 2025. | (4 marks) |

- d) Using an appropriate technique, plot the data given in the Table 1 below. (10 marks)

*Table 1: Survivorship statistics of two hypothetical countries*

| <i>Population X</i> | <i>Population Y</i> | <i>Age</i> |
|---------------------|---------------------|------------|
| 30 000              | 30 000              | 0          |
| 29 500              | 29 050              | 5          |
| 28 700              | 27 900              | 10         |
| 28 500              | 27 500              | 15         |
| 28 300              | 27 200              | 20         |
| 27 100              | 26 800              | 25         |
| 26 900              | 25 500              | 30         |
| 25 700              | 24 100              | 40         |
| 24 300              | 23 100              | 50         |
| 23 700              | 21 500              | 60         |
| 22 600              | 20 300              | 70         |
| 20 100              | 18 100              | 80         |
| 18 100              | 17 100              | 90         |
| 0                   | 0                   | 100        |

- e) Table 2 below shows the world's major religions as well as the percentage of the world's population following each of these religions. Draw a pie chart of radius 60mm to show this set of data. (10 marks)  
(40 Marks)

*Table 2: World religions*

| <b>Religion</b> | <b>Percentage of people (%)</b> |
|-----------------|---------------------------------|
| Christians      | 32,5                            |
| Muslims         | 21,5                            |
| Hindus          | 14                              |
| Non-religious   | 16                              |
| Chinese Folk    | 5                               |
| Buddhists       | 5                               |
| Primal Faiths   | 5                               |
| Sikhs           | 0.4                             |
| Jews            | 0.2                             |
| Others          | 0.4                             |

**SECTION B: SHORT ANSWERS / ESSAYS (60 MARKS)**  
**ANSWER ANY TWO QUESTIONS**

**QUESTION 2**

Discuss why it is important to conserve forest resources.

**(30 Marks)**

**QUESTION 3**

a) Using examples compare and contrast morphologic and cascading systems. (15 marks)

b) Using a lake as an example, explain the cycling of matter and flow of energy in an ecosystem. (15 marks)

**(30 Marks)**

**QUESTION 4**

a) Using examples, explain the infrastructural challenges posed by urbanization. (15 marks)

b) Explain the measures which are used in evaluating the climatic environment as a hazard. (15 marks)

**(30 Marks)**

**QUESTION 5**

Explain the epidemiology transition model.

**(30 Marks)**