



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH, APPLIED SCIENCES AND NATURAL RESOURCES**

**DEPARTMENT OF HEALTH SCIENCES**

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| <b>QUALIFICATION :</b> BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES |                              |
| <b>QUALIFICATION CODE:</b> 08 BOHS                               | <b>LEVEL:</b> 5              |
| <b>COURSE NAME:</b> HOUSING AND HEALTH                           | <b>COURSE CODE:</b> HAH 521S |
| <b>SESSION:</b> NOVEMBER 2022                                    | <b>PAPER:</b> THEORY         |
| <b>DURATION:</b> 3 HOURS   | <b>MARKS:</b> 110            |

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| <b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b> |                             |
| <b>EXAMINER</b>                                     | <b>MS. CHARMAINE JANSEN</b> |
| <b>MODERATOR:</b>                                   | <b>MR IMMANUEL ZERIAPI</b>  |

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| <b>INSTRUCTIONS</b>   |  |
| <ol style="list-style-type: none"><li>1. Answer all the questions in Section A, B and C</li><li>2. Write clearly and neatly.</li><li>3. Number the answers clearly.</li></ol> |  |

**THIS QUESTION PAPER CONSISTS OF 6 PAGES (Including this front page)**

## SECTION A [35 MARKS ]

### QUESTION 1 ( 10 Marks )

#### 1.0 Select the answer that suits the statement best:

- 1.1 The General Goal of Town Planning is: [1]
- A. To promote continued, coordinated, and harmonious development.
  - B. To promote Health, Safety, Order, Amenity, Convenience and General Welfare.
  - C. To promote Efficiency and Cost-effectiveness in the process of development.
  - D. To ensure the attraction of new investment.
  - E. All of the above.
- 1.2 The Laws and Regulations governing Town Planning in Namibia are: [1]
- A. Town Planning Ordinance 18 of 1954.
  - B. The Development Facilitation Act.
  - C. The Townships and Division of Land Ordinance, Ordinance 11 of 1963.
  - D. The Development and Upgrading Strategy
  - E. (A) and (C)
- 1.3. An indicator that determines whether a settlement performs well in terms of "Preventative Health Care" is: [1]
- A. Crude Death Rate.
  - B. Percentage of people with access to adequate sanitation services.
  - C. Number of Days in which activities were limited due to illness or injuries.
  - D. Percentage of people fully vaccinated.
  - E. None of the above
- 1.4 In formal Settlements are characterized by: [1]
- A. Insecure residential status and Poor structural quality of housing
  - B. Inadequate access to safe water
  - C. Inadequate access to sanitation and other basic infrastructure and services
  - D. All of the above
  - E. None of the above
- 1.5. Two characteristics of 'Linear Settlements' are: [1]
- A. It Spreads employment opportunities over a large area & The area is easily accessed by people moving in from the sides.
  - B. It develops where defense is a priority & Settlements develop on high slopes to avoid flooding.
  - C. Settlements are isolated and are far from each other & Settlements are generally very small.
  - D. The settlement develops outward from its Central Business District & Many of the urban poor lives in informal settlements on the outskirts of the town.
  - E. None of the above.

- 1.6 Advantages of Zoning is/are: [1]
- A. It determines land values
  - B. It lays down restrictions on land use.
  - C. It allows the dispersion of industries away from residential areas
  - D. It allows for the provision of public services
  - E. (C) & (D)
- 1.7 The Principles of the City of Windhoek's "Development and Upgrading Strategy" is: [1]
- A. Services in all development options, especially lower levels, should be based on reasonable health standards.
  - B. Reasonable Social Acceptance and understanding of the development options should be ensured.
  - C. Community Initiative shall be encouraged for gradual improvement of own living conditions.
  - D. All of the above.
  - E. None of the above.
- 1.8 The structure of a building is as follows: height is 2 meters, length is 8 meters and width is 6 meters. Calculate the size of the window. [1]
- A. 2.3 m
  - B. 1.8 m
  - C. 2.1 m
  - D. 2.8 m
  - E. 4.8 m
- 1.9 How much air is in the room? Length 5-meter, height 3-meter, width 2 meters. [1]
- A. 6 m
  - B. 10 m
  - C. 15 m
  - D. 30 m
  - E. 18 m
- 1.10 The minimum height of a door should be: [1]
- A. Less than 1 m
  - B. Less than 1.5 m
  - C. Less than 2.5 m
  - D. Less than 3 m
  - E. Less than 3.5 m

## QUESTION 2 (10 Marks )

### 2.0 Indicate if the statement is true or false.

- 2.1 The foundation of a house in Windhoek shall not be less than three (3) meters in height. [1]
- 2.2 The house should be at least 1.5 meters away from the municipal road. [1]
- 2.3 Urbanization creates a situation where people are less self-reliant. [1]
- 2.4 The general goal of Town Planning is to promote continued, coordinated, and harmonious development. [1]
- 2.5 An example of a Noxious industrial building is an Acid plant (smelter mine). [1]
- 2.6 An example of an indicator that determines whether a settlement performs well in terms of "Preventative Health Care" is a percentage of people fully vaccinated. [1]
- 2.7 Mobile Clinics: must be self-contained units and serve at least 5000 people or 1250 households. [1]
- 2.8 According to the building regulations the window of a room in Windhoek ( length =5m ; width= 3m ; height =2.5 m) should be 2.5m. [1]
- 2.9 The surface area for the room (length =8m ; width 4m ; height =3m) should be 32m . [1]
- 2.10 Vermin proof means no dust allowed in a building. [1]



### QUESTION 3 (15 Marks)

3.0 Match the term in Column A with the correct description/definition in Column B.

[15]

| COLUMN A                 | COLUMN B   |     |
|--------------------------|--|-----|
| 3.1 Farm                 | A. A very large settlement with a large railway station, shopping complex, cathedral, a large hospital, museum university and office blocks.                               | [1] |
| 3.2 Hamlet               | B. A larger settlement with several shops, churches, a senior school, supermarkets, a doctor, a dentist, banks, and a small hospital.                                      | [1] |
| 3.3 Village              | C. Include any form of shelter or settlement which is illegal, falls outside of government control or regulation or is not afforded protection by the state.               | [1] |
| 3.4 Town                 | D. A settlement of only a few houses with no services.   | [1] |
| 3.5 City                 | E. An isolated settlement consisting of one house.   | [1] |
| 3.6 Urbanization         | F. Refers to houses or buildings collectively; accommodation of people; planning or provision of accommodation by an authority.  | [1] |
| 3.7 Housing:             | G. Creates a situation in which people are more interdependent, more inter-reliant, and less self-reliant and independent. Urbanization has positive and negative effects: | [1] |
| 3.8 Informal Housing:    | H.A settlement with a few services such as a church, public house, and a small shop.   | [1] |
| 3.9 Evaluation           | I. A person that draws maps  | [1] |
| 3.10 Cartographer        | J. It is the systematic investigation of the worth or merit of a project or program.   | [1] |
| 3.11 Natural ventilation | K. Existing building plan should be in the colour.   | [1] |
| 3.12 Floor plan          | L. Proposed work on a building plan  | [1] |
| 3.13 Indicators          | M Evaluation tools that are used to measure change directly or indirectly  | [1] |
| 3.14 Red colour          | N. Show the builder the size of the building, the verandah, the thickness of the walls, where to place the doors and windows   | [1] |
| 3.15 grey colour.        | O. Air flow - windows and doors  | [1] |

## SECTION B [ 35 MARKS]

### QUESTION 4 ( 20 marks )

- 4.1 Define indicators and describe at least three types of health indicators and give an example of each. [3x3]
- 4.2 What are the benefits of Town Planning? [ 5]
- 4.3 Explain the effects of poor lighting in a habitable room. [9]

### QUESTION 5 (15 Marks)

5.0 Differentiate between the following:

- 5.1 Ohorongo cement 32.5 and Ohorongo cement 42.5 [2]
- 5.2 External wall and Internal wall. [4]
- 5.3 Red brick, Concrete brick, and Concrete interlock. [9]

## SECTION C [ 40 MARKS ]

### QUESTION 6 (20 Marks )

- 6.1 Summarize the challenges and constraints a local authority might experience when proper town planning was not practiced. [10]
- 6.2 Elaborate at least ten important facilities a town should have for proper town planning. [10]

### QUESTION 7 (20 Marks )

- 7.0 Explain and discuss in detail the requirements to build a house in an urban area. [20]

**GOOD LUCK**