



**PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH AND APPLIED SCIENCES

DEPARTMENT OF HEALTH SCIENCES

QUALIFICATION : BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES	
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DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
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INSTRUCTIONS
<ol style="list-style-type: none">1. Answer all the questions in Section A, B and C2. Write clearly and neatly.3. Number the answers clearly.

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 structure of a building is as follows: height 6 meters, length is 6 meters and width is 3 meters. Calculate the size of the window. [1]
- A. 2.3m
 - B. 1.8m
 - C. 2.1m
 - D. 2.8m
 - E. 3.8m
 - F. 2.7m

- 1.2 How much air is in the room? Length 6meter, height 3 meter, width 2 meter. [1]
- A. 90.2
 - B. 100
 - C. 24
 - D. 15
 - E. 18
 - F. 36

- 1.3 Informal Settlements are characterized by: [1]
- A. Inadequate access to safe water.
 - B. Inadequate access to sanitation
 - C. Poor structural quality of housing and Insecure residential status
 - D. Other basic infrastructure and services
 - E. All the above
 - F. None of the above

- 1.4 Factors that influence areas to develop is: [1]
- A. Market forces and politics
 - B. Surrounding patterns of development.
 - C. Physical conditions of the site and Regulatory Requirements
 - D. Health status and waste management of the town
 - E. All of the above
 - F. None of the above.

- 1.5 Advantages of Zoning 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)
 - F. (A) & (B)

- 1.6 The Laws and Regulations governing town planning in Namibia is: [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
 - F. None of the above
- 1.7 The minimum height of a door should be: [1]
- A. Less than 2.5 m
 - B. Less than 1.5 m
 - C. Less than 1 m
 - D. Less than 3 m
 - E. Less than 3.5
 - F. None of the above
- 1.8 The Principle of "Sustainability" that guides town planning determines that: [1]
- A. Land is only developed in accordance with environmental laws and regulations and development will only be allowed should it be environmentally feasible.
 - B. Public Involvement in planning must be promoted and be inclusive of all those affected or interested in planning matters.
 - C. Planning should take account of and relate to the sectoral policies of other spheres and departments of government.
 - D. Decisions must be made in the public domain and without undue delay, with written reasons available to any interested party on request and no planning decisions taken behind closed doors.
 - E. all of the above
 - F. None of the above
- 1.9 The Principle of "Integration" that guides town planning implies that: [1]
- A. Affected parties have the right to access to information pertinent to land use and development plans that are being considered by the city.
 - B. Equal standards of public service delivery, equal distribution of public and social facilities should be adhered to.
 - C. Planning should promote 'mixed use' developments.
 - D. Capacities of affected communities should be enhanced to enable them to comprehend and participate meaningfully in development and planning processes affecting them.
 - E. All of the above
 - F. None of the above

- 1.10 To inspect the building elements in a room, which of the following order should be followed? [1]
- A. Walls, floor, windows, doors, ceiling
 - B. Windows, doors, ceiling, floor, walls
 - C. Ceiling, walls, floor, windows. Doors
 - D. Floor, walls, windows, doors, ceiling
 - E. All of the above
 - F. None of the above

QUESTION 2

(10 MARKS)

- 2.0 Assess the following statements and decide whether they are true or false.
- 2.1 The general goal of Town Planning is to promote continued, coordinated and harmonious development. [1]
- 2.2 Example of a Noxious industrial building Acid plant (smelter mine). [1]
- 2.3 An example of an indicator that determines whether a settlement performs well in terms of "Preventative Health Care" is percentage of people fully vaccinated. [1]
- 2.4 Mobile Clinics must be self-contained units and serve at least 5000 people or 1250 households. [1]
- 2.5 The external walls minimum width should be not less than 440 mm. [1]
- 2.6 When you build a house, the minimum height should be 1.5 m in the south because people at the South and 2.5 m at the east because people are big and tall. [1]
- 2.7 The structure of the houses in Havana informal settlement contributed to the high Hepatitis E cases. [1]
- 2.8 A foundation of a house shall not be less than three (3) meters height. [1]
- 2.9 The coloring of brown materials on the plan indicates new glass. [1]
- 2.10 Urbanization creates a situation where people are less self-reliant. [1]

QUESTION 3**(15 MARKS)**

3.1 Match the term in Column A with the correct description/definition in Column B. [15]

COLUMN A	COLUMN B
3.1 Planning principles	A. Villages that are situated by a water supply often grow into towns.
3.2 Scale drawing	B. Is the total extent in space that can be seen when looking in a given direction.
3.3 Floor area	C. New townships be established in an orderly manner through the technical evaluation of all such proposals/intentions which may lead to the establishment of a new township.
3.4 Photometer	D. Guide plans (structure plans) town planning schemes
3.5 Elevations	E. A very large settlement with a large railway station, shopping complex, cathedral, large hospital, museum university and office blocks.
3.6 Visual field	F. Used to make the building plan small enough to fit on Paper
3.7 Benefits of town planning:	G. Decrease erf sizes in such areas to provide more cost-effective solutions
3.8 Town planning tools	H. The instrument used to measure light.
3.9 Village	I. A settlement with a few services such as a church, public house and a small shop.
3.10 City	J. Is a special type of drawing used to show what a building will look like from the outside.
3.11 Rural Settlement	K. Provide a continuity of multifunctional roads.
3.12 Soil conditions	L. The regulation of development ensures it does not negatively affect others or reduce the capacity of the land and natural systems
3.13 Circulation principles	M. Literacy and educational attainment levels are generally low.
3.14 Nucleated settlements	N. Create dignified living environment.
3.15 Town planning laws and regulations ordinance ii of 1963, as amended.	O. Plan area of a room measured between internal finish wall surfaces.

SECTION B (35 MARKS)

QUESTION 4

(24 MARKS)

4.0 Differentiate between the following:

4.1 Ohorongo cement 32.5 and Ohorongo cement 42.5 [2]

4.2 External wall and Internal wall. [4]

4.3 Water pipe, Sewage pipe and an Electrical pipe. [3]

4.4 Red brick, Concrete brick and Concrete interlock. [5]

4.5 Define the following:

A. Environmental health: [5]

B. Town planning [5]

QUESTION 5

(11 MARKS)

5.1 Discuss the differences between Urban and Rural Settlements with a specific reference to 'Economic Activities', 'Land Use' and 'Social Structure'. [5]

5.2 Mention at least three types of health indicators and give an example of each. [2x3]

SECTION C (30 MARKS)

QUESTION 6

(30 MARKS)

6.1 Explain and discuss in detailed the requirements to build a house in an urban area.

Building plans [20]

6.2 Summarize the challenges and constrains a local authority might experience when proper town planning was not practice. [10]

GOOD LUCK