



**NAMIBIA 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	LEVEL: 5
COURSE CODE: EVP510S	COURSE NAME: ENVIRONMENTAL PLANNING
DATE: JUNE 2025	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Mr. P Genis
MODERATOR:	Ms. GB van Rooi

INSTRUCTIONS:
<ol style="list-style-type: none">1. Answer ALL the questions.2. Read all the questions carefully before answering.3. Number the answers clearly and legibly.

THIS QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)

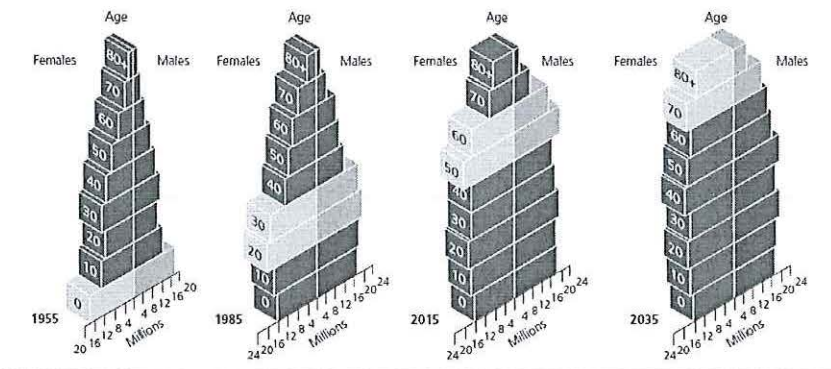
Question 1

- a) A critical aspect of solutions to environmental challenges is to follow an environmental decision-making process. Indicate the important steps in this process. (7)
- b) Pollution is anything in the environment that is harmful to the health, survival or activities of humans or other organisms. Elaborate on pollutant sources. (4)
- c) Answer each question below by writing True or False next to each respective number. (4)
 - i) Chattanooga city encouraged recycling to address toxic waste in the river.
 - ii) Ecological footprint is the highest rate of resource use without reducing available supply.
 - iii) Economic development is the increase in output of the gross domestic product (GDP).
 - iv) Common resource rights are available to anyone.

[15]

Question 2

- a) The population pyramids below show the *Baby Boom* category in the respective years. Describe the implications for the United States of America. (5)



- b) Urbanisation is measured by the percentage of its population living in urban areas. Indicate the urbanisation push factors. (3)
- c) How and where we live determine the annual carbon footprint per household. Write down the ratio of the annual carbon footprint between suburban and urban households. (2)

[10]

Question 3

- a) Define *ecosystems and ecology* in your own words to clarify your understanding of these concepts. (6)
- b) The newly elected President of Namibia has recently announced to investigate nuclear power as a sustainable source of energy. Illustrate the disadvantages of the conventional nuclear

energy cycle. (6)

- c) Answer each question below by writing True or False next to each respective number. (3)
- i) Energy conservation is how much work we can get from each unit of energy used.
 - ii) A benefit of solar energy is high net energy yield.
 - iii) The transition to a sustainable energy future includes research and development.

[15]

Question 4

- (a) A major health hazard is the concentration of highly toxic methylmercury in the chemical pathways found in food chains and aquatic systems. Briefly describe how we can prevent mercury pollution. (4)
- (b) Prevention approaches to waste reduction include reusing, recycling or composting of waste. Elaborate on the recycling of paper as discussed in the case study. (3)
- (c) Identify the factors that influence the levels of toxicants. (3)
- (d) How can we prevent motor vehicle air pollution? (3)
- (e) Climate change is often described as the biggest challenge of this century. Why do you think climate change is very complex? (2)

[15]

Question 5

- a) Identify strategies to reduce poverty. (3)
- b) Gunter Pauli's *Blue Economy* aims to shift society from scarcity to abundance with what is locally available and tackling issues that cause environmental and related problems in new ways. Explain (what & how) four innovative principles as solutions for a blue economy type. (4)
- c) Politics is concerned with the process of actions and policies of government and is critical to environmental sustainability. List the stages of the policy life cycle. (4)
- d) Explain the role of government to serve environmental and other public interests. (4)

[15]

Question 6

- (a) Wheeler, in his book: *Planning for Sustainability*, identified unsustainable development trends. Discuss these issues under the category of mobility & transportation. (5)

- (b) Urban sprawl is characterised by low-density growth on urban edges, eliminating surrounding agricultural/wild lands and loosely connected land uses. Identify the undesirable impacts of urban sprawl in respect of land & biodiversity. (4)
- (c) Sustainable urban development approaches include *New Urbanism and Smart Growth*. Recommend the elements and benefits of Smart Growth. (6)

[15]

Question 7

- a) A key function of the Minister under the Environmental Management Act, 2007 (EMA), is to make policies for the use, protection and management of the environment. Summarise the functions of the Sustainable Development Advisory Council, appointed by the Minister under the EMA. (5)
- b) Indicate the key stages for environmental impact assessment. (5)
- c) Briefly explain the sustainability indicators of economy by Van Biljon, 2014. (5)

[15]

TOTAL: [100]