



**Nelson Mandela UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

**FACULTY OF ENGINEERING AND SPATIAL SCIENCES**

**DEPARTMENT OF ARCHITECTURE AND SPATIAL PLANNING**

<b>QUALIFICATION:</b> BACHELOR OF TOWN AND REGIONAL PLANNING	
<b>QUALIFICATION CODE:</b> 07BTAR	<b>LEVEL:</b> 5
<b>COURSE:</b> ENVIRONMENTAL PLANNING	<b>COURSE CODE:</b> EVP510S
<b>DATE:</b> JULY 2022	<b>PAPER:</b> THEORY
<b>DURATION:</b> 3 HOURS	<b>MARKS:</b> 100

<b>SECOND OPPORTUNITY / SUPPLEMENTARY EXAMINATION QUESTION PAPER</b>	
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**INSTRUCTIONS**

1. Answer **all questions**.
2. Read all the questions carefully before answering.
3. Marks for each question are indicated at the end of each question.
4. Please ensure that your writing is legible, neat and presentable.

**PERMISSIBLE MATERIALS**

1. Examination paper & script
2. Pen, ruler, pencil, eraser

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

**Question 1****[10]**

(a) True or False. Answer each question by writing True or False next to each respective number (1 mark each). [5]

1. Environmental planning aims for a win-win situation for society and the environment.
2. Population control ensures little or no waste in natural systems.
3. Natural resources degradation is a principle of sustainability.
4. Sustainable societies meet current & future basic needs in a just & equitable manner.
5. Urban growth is the percentage of the population of a country living in an urban area.

(b) Give a brief description of the environmental transformation in the *case study of the City of Chattanooga, USA* by indicating the relevant measures implemented (maximum 5 marks) related to the environmental problems (highly polluted air, toxic waste in river, out-migration of industries & people, high unemployment & crime) to improve the environmental sustainability of the city. [5]

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**Question 2****[15]**

(a) Urbanisation is measured by the percentage of population living in urban areas. The main reasons for urbanization is classified as “push” factors from rural areas and “pull” factors to urban areas. Select the pull factors to urban areas. [5]

(b) In the recent publication by Development Workshop Namibia (Informal settlements in Namibia: their nature and growth), it is recommended to turn rapid urbanisation and the creation of new townships into economic opportunities. Illustrate this recommendation as discussed by Weber and Mendelsohn, 2017. [5]

(c) Show five factors affecting death/mortality rates. [5]

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**Question 3****[15]**

(a) Demonstrate the respective processes affected by humans in the water-cycle ecosystem. [5]

(b) Outline five benefits in evaluating the trade-offs during your motivation to convince government on the use of solar electricity. [5]

(c) Namibia is providing uranium to the global market for nuclear energy needs. The government is trying to add value and produce conventional nuclear power. Argue the disadvantages in your report to advise the Minister. [5]

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**Question 4** [15]

- (a) Define risk and summarise the key risk evaluation & reduction principles. [5]
- (b) In advising the local chamber of commerce and industry on strategies to reduce solid waste, examine five strategies towards this aim. [5]
- (c) The biggest considered challenge of this century is significant climate change – scientific consensus is that the atmosphere is warming rapidly due to human activities. Demonstrate strategies that countries can implement to prepare for the projected harmful effects of essentially irreversible climate change. [5]
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**Question 5** [15]

- a) The public sector plays an important role towards a new vision for environmental economic reform to affect economic transformation, especially when private markets fail to provide goods and services sustainably. Distinguish changes Namibia can apply in government policy & strategies to reduce poverty. [5]
- 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. Show five local BLUE ECONOMY opportunities. [5]
- c) Environmental literacy ideas are: *natural capital matters, threats to natural capital is increasing & ecological damages have tipping points*. Point out key goals towards environmental literacy that governments can implement. [5]
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**Question 6** [15]

- a) Van Biljon (2014) identified sustainability characteristics (indicators) for the influence spheres of *economy, nature, society and space* towards sustainability in urban and regional planning. Write down the sustainability indicators for the sphere of nature. [5]
- b) Wheeler, 2013 identified four categories of unsustainable development trends. Rewrite in your own words the trends of mobility & transportation. [5]
- c) The ecocity and woonerf concepts are more environmentally sustainable urban concepts built around the scientific principles of sustainability. Explain how people in the ecocity of Curitiba, Brazil have applied the scientific principles of sustainability to make their city more sustainable. [5]
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**Question 7****[15]**

(a) The Minister of Environment and Tourism, the Sustainable Advisory Development Council and the Environmental Commissioner has designated functions as provided for in sections 4 and 17 respectively of the Environmental Management Act (Act 7 of 2007). Briefly describe any five functions of the of the Environmental Commissioner. [5]

(b) Give the criteria of crimes related to environmental clearance certificates as well as the penalty for these crimes as stipulated in the Act (Act 7 of 2007). [5]

(c) ENVIRONMENTAL IMPACT ASSESSMENT (EIA) is the process on the mitigation of impacts of proposed activities in reaction of development proposals and assessment of the effect on the environment. Interpret any five key characteristics (stages) of EIA in your own words. [5]

**TOTAL****[100]**

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***THE END***