



**PROGRAM** : BACHELOR'S IN URBAN AND REGIONAL  
PLANNING

**SUBJECT** : ENVIRONMENTAL SCIENCE AND  
MANAGEMENT 3B

**CODE** : ESMTRB3

**DATE** : MAIN EXAMINATION  
NOVEMBER 2019

**DURATION** : 3(THREE HOURS)

**WEIGHT** : 50:50

**TOTAL MARKS** : 100

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**EXAMINER** : PROF W MUSAKWA

**MODERATOR** : Dr J MAGIDI

**NUMBER OF PAGES** : 3 (THREE) PAGES.

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#### **INSTRUCTIONS TO CANDIDATES**

- PLEASE ANSWER ANY THREE IN SECTION A AND ALL IN-SECTION B
  - YOU MUST SHOW COMPETENCY IN THEORY & CONCEPT AWARENESS.
  - READ THE PAPER AS A WHOLE BEFORE YOU START
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**SECTION A**

1. Adequately define the following
  - a) Carbon sequestration (7)
  - b) Environment (5)
  - c) Sustainable Development (8)
2. Provide a discussion on the landscape approach to land use planning (20)
3. Define climate change and discuss how it manifest itself and suggest ways of climate change adaptation using ecosystem based adaptation (EBA). (20).
4. Discuss the various environmental ethics and philosophies and their impact on environment planning. (20).
5. Define the following
  - a. MIOMBO forest (5)
  - b. Vulnerability (5)
  - c. Anthropocene (5)
  - d. Climate change mitigation (5)
6. Why is the Intergovernmental Panel on Climate Change (IPCC), Millennium Ecosystem Services Assessment (MEA) and the Sustainable Development Goals (SDGs) important global decrees and reports. Discuss. (20)

**[60]**

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**SECTION B**

7. (a) Define and discuss global environmental change, its agendas and drivers. (20)  
(b) Ecosystems services (ESS) are important for human well-being. Define ecosystems services and provide an account of the current stock of global ecosystems services focusing on the function, actual use, benefits and value to people. (20)

**[40]**

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**TOTAL = 100**

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