NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF ENVIRONMENTAL SCIENCE

DEPARTMENT OF ENVIRONMENTAL SCIENCE

MASTER OF SCIENCE IN CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT

CLIMATE CHANGE AND URBAN DEVELOPMENT

ECS 5202

Final Examination Paper

March 2024

This examination paper consists of 2 pages

Time Allowed: **3 hours**

Total Marks: 100

Special Requirements: None

Examiner's Name: Dr S B Mutale

INSTRUCTIONS

1. Answer any **FOUR** questions
2. Each question carries 25 marks

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25
6.	25
TOTAL	**100**

1. It is believed that energy efficient urban planning and design can contribute to decrease of greenhouse gas emissions and thus lessen the threat of global climate change. Discuss the practical actions that entail energy efficient urban planning and design to decrease greenhouse gas emissions.

2. The twelfth World Meteorological Congress (1995) concluded that populations in many urban areas are the most vulnerable to climate and climate change. Assess the validity of this finding by the World Meteorological Organisation (WMO).

3. It is possible to modify urban climate and mitigate climate change effects in cities through specific urban design structures. With clear examples discuss urban structures that can possibly be designed to mitigate climate change effects.

4. "Official urban policies so often increase poor people's vulnerability to environmental hazards and climate shocks rather than reducing them".(Satterthwaite et al 2007). Discuss.

5. Increasing urbanisation has significant implications for climate change, air quality water availability and quality land use and waste management, (Bloomberg, 2014). Explain

6. Explain the possible financial and social impacts of rising sea level due to climate change, on cities and regions not necessarily located in coastal areas.