



# GWANDA STATE UNIVERSITY

## FACULTY OF ENGINEERING AND ENVIRONMENT

### DEPARTMENT OF GEOMATICS AND SURVEYING

#### Environmental Design/Planning

EGS 2213

#### Final Examination Paper

This examination paper consists of 4 pages

Time Allowed : 3 hours

Total Marks : 100

Examiner's Name : Mr. T T CHIGOVA

#### INSTRUCTIONS

1. Answer **ALL 4** questions
2. Each question carries **25** marks
3. Use of calculators is permissible, but programmable calculators are not allowed in the exam

|    |    |                                                                                                                                                                                                                                                                                                                                                                                                    |    |
|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. | a) | Briefly describe the following terms:                                                                                                                                                                                                                                                                                                                                                              |    |
|    |    | i) Accessibility                                                                                                                                                                                                                                                                                                                                                                                   | 5  |
|    |    | ii) Robustness                                                                                                                                                                                                                                                                                                                                                                                     | 5  |
|    | b) | <i>‘Most Universities are moving towards the Smart Campus/Next Generation Campus where through an intelligently connected everyday university life, digital natives are offered new experiences that they already know and use their private lives’.</i> With reference to Epoch Mine Campus, argue how the Smart City improve the functionality/operations of the academic tertiary institutions. | 15 |

|    |     |                                                                                                                                                                                       |    |
|----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 2. | a)  | Define the following terms as used in environmental design/planning:                                                                                                                  |    |
|    | i.  | Green infrastructure                                                                                                                                                                  | 10 |
|    | ii. | Variety                                                                                                                                                                               | 5  |
|    | b)  | <i>‘Most economic problems in Zimbabwe are a result of poor infrastructure development’.</i> Evaluate, how a good infrastructure can be an enabler of economic viability in Zimbabwe. | 10 |

|    |    |                                                                                                                           |    |
|----|----|---------------------------------------------------------------------------------------------------------------------------|----|
| 3. | a) | By using examples or illustrations, briefly describe the following terms and/or phrases as used in urban design practice: |    |
|    |    | i) Permeability                                                                                                           | 5  |
|    |    | ii) Public Realm                                                                                                          | 5  |
|    |    | iii) Slums                                                                                                                | 5  |
|    | b) | a) By using examples or illustrations, briefly describe the key features of good urban design/planning.                   | 10 |

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|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 4. | a) | Justify, how the von Thunenn's theory is still applicable to today's environmental design/planning.                                             | <b>10</b> |
| 4. | b) | a) Describe how the EIA process in Zimbabwe is conducted, and what are principles of mitigation when carrying out environmental design projects | <b>15</b> |

**- THE END -**

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