



UNIVERSITY
OF
JOHANNESBURG

PROGRAM : **BACCALAUREUS TECHNOLOGIAE:**
Town and Regional Planning

SUBJECT : **ENVIRONMENTAL STUDIES IV**

CODE : **ENS 431**

DATE : **SUMMER SSA EXAMINATION 2015**
10 DECEMBER 2015

DURATION : **(SESSION 1) 08:00 - 11:00**

WEIGHT : **50: 50**

TOTAL MARKS : **100**

ASSESSOR : **MR J OKAFOR**

MODERATOR : **DR. H. WIECHERS**

NUMBER OF PAGES : **3 PAGES**

INSTRUCTIONS

1. THIS IS NOT AN OPEN BOOK.
2. READ THE QUESTIONS CAREFULLY.
3. WRITE NEATLY AND LEGIBLY.
4. PLEASE ANSWER ALL QUESTIONS.
5. BE CONCISE, LOGICAL AND COHERENT

QUESTION 1:

- 1.1 Explain as one unit EIA, Specialist Study, EMP and what their purposes are.
- 1.2 Indicate what type of development you would allow on Inherent Risk class 1, 2, 4, 7 and 8 dolomite and explain the three primary sinkhole trigger mechanisms and offer possible remedy to each.

5 marks each **subtotal: [10]****QUESTION 2:**

- 2.1 What in your view are the 5 (five) most crucial environmental issues Gauteng province faces on the call to developmental compliance and sustainability.
- 2.2 Explain EIA-SEA purpose on development and how Town Planners can promote sustainable development through this. Use practical examples as well.

5 marks each **subtotal: [10]****QUESTION 3:**

- 3.1 Write short notes on Integrated Environmental Management (IEM) and the overall understanding of EMPR processes.
- 3.2 With any of the two tools applied discuss how IEM is advised and used in environmental management.

Subtotal: [10]**QUESTION 4:**

Write not more than one page note on each of these below:

- 4.1 Discuss the earth as an **open** system.
- 4.2 Explain carrying capacity and name 3 biological ways to control it
- 4.3 Discuss light as a physical component of the environment.
- 4.4 Discuss the man as an ecological factor and influence on the artificial ecosystem.
- 4.4.1 Define Homeostasis and discuss two energy laws.

Subtotal: [20]**QUESTION 5:**

The City of Tshwane in conjunction with National Department of Housing intends to purchase land for a housing development. The site is located outside the urban edge with biodiversity, high agricultural and wetlands potential inherent. The site is 150 ha in extent. They first want you to do a feasibility study.

- Provide them with a hypothetical written report on the basis of your understand and likely findings.
- Thereafter develop a motivation on why there is need for protection or not used. Draw a site development sketch (with access roads and services infrastructure) and provide a motivation, if you think that the project will be viable and sustainable.

Subtotal: [20]

QUESTION 6:

This activity must be done, is the chaos emanating from the public sector. What is it the planner asked when they got to his office? It is “The town council in the eastern part of Gauteng, owns a property on a Class 1 ridge with area prone to probability of class 7 and 8 dolomite solubility and they would like to establish a township on the ridge”. Therefore planner work out this project as follows:

- Write a short and simplified report on what would be your findings.
- Indicate and discuss what you would advise them.
- Also indicate what process they would need to follow.
- The council does not understand the fuss and they want you to motivate your concerns. Provide 2 reasons from your planning norms regarding your standing.

Subtotal: [15]

QUESTION 7:

You are approached by a developer in the Northern part of greater Johannesburg-area, outside the urban edge, to develop a world class venue for conferences and other social functions. The Red Data specialist study showed the presence of a category A3 Red Data Plant species was found on site.

What does the rank A3 mean in terms of the Gauteng Red Data policy?

What is a buffer zone?

Which buffer zone would you propose for this plant? Why?

What is meant by *in situ* or *ex situ* conservation?

Will you conserve the plant *in situ* or *ex situ*?, provide 1 reason for your answer

Name and discuss 2 Categories of Red Data Plant species.

Why are you called for this purpose rather than the ideals of environmentalist and developers?

Subtotal: [15]

Total 100 marks