



<b>FACULTY</b>	AGRICULTURE, ENGINEERING AND NATURAL SCIENCES		
<b>DEPARTMENT</b>	ENVIRONMENTAL SCIENCE		
<b>SUBJECT</b>	GIS AND LOCAL PLANNING		
<b>SUBJECT CODE</b>	GSO 3860		
<b>DATE</b>	FEB 2023		
<b>DURATION</b>	3 HOURS	<b>MARKS</b>	100

#### PROMOTIONAL EXAMINATION

Examiner: QUEEN E KUVEZA

Internal Moderator: M. HIPONDOKA, PhD

#### Instructions

1. Work in an orderly manner and present your work as neatly as possible.
2. While most of the marks will be awarded for content, candidates must bear in mind the importance of presentation, i.e. insight and critical thinking.
3. Number your questions correctly and clearly.
4. This paper consists of ONE (1) page (excluding this front page).
5. Answer ALL questions

**SECTION A****Answer All Questions****(55)**

1. List and briefly explain what the 3 types of crime analysis are. (6)
2. Briefly explain what Planning and Urban Planning are. (10)
3. Briefly explain the integration of departmental address-based functions as one of the strategies local governments can adopt for a cost effective and value added GIS system. (10)
4. What is the primary reason planners have adopted/opted the use of GIS? (4)
5. Mention 5 key strategies needed for any tactical plan to facilitate a successful GIS at a Local Government Level. (5)
6. There are 2 types of Criminal Investigations, mainly Geographic Profiling and Predictive Policing. Give a brief description of these two investigative methods. (7)
7. Briefly explain what Enterprise GIS is? (3)
8. The table below represent a Land Suitability Analysis. Briefly explain the 5 stages of a Land Suitability Analysis represented by this table. (5)

Land Use	Protect waterways	Reduce runoff	Soil Health	Scenic amenity	Slope	Native vegetation	Access to roads
Agriculture		X	X		X		
Residential				X	X		X
Ecosystems	X	X	X			X	

9. Briefly define what a Base Map is? (4)

**SECTION B****Answer All Questions****(30)**

1. What is the purpose of GIS in Demographic Analysis? (7)
2. In order for any workflow in a GIS application to be deemed successful, there are 8 steps you as a GIS specialist would need to carry out. Mention these 8 steps. (8)
3. At Local Government, the availability of GIS as a tool for decision making has profound implications in 3 major areas. Mention and explain all the major areas. (15)
4. Describe in as much detail as possible, the process of land suitability analysis used to find a suitable piece of land for use as a playground in an urban area (town), using GIS. (16)

END