GWANDA STATE UNIVERSITY

FACULTY OF ENGINEERING AND ENVIRONMENT

DEPARTMENT OF GEOMATICS AND SURVEYING

Cartography

EGS 3211

Final Examination Paper

This examination paper consists of 4 pages

Time Allowed : 3 hours

Total Marks : 100

Examiner's Name : Mr. J B MANYATI

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

INTRODUCTION: **[25 marks]**

1.	a)	Discuss the main characteristics of maps.	5
	b)	List and give brief notes on the different Map Classifications. **NB**: Give your answer in tabular format as shown below:	15

Map Classification Criteria/Group (***2 classes***)	Examples of Map Classes under such classification (***minimum of 2 classes***)	Examples of types of maps under these classes.

	b)	Differentiate between a climate map and a weather map.	5

MAP PROJECTIONS: **[25 marks]**

2.	a)		With the aid of illustrations where possible, describe the following Projections citing properties preserved by each:	
		i.	Cylindrical.	5
		ii.	Mercator.	4
		iii.	Azimuthally Equidistant.	4
		iv.	Equidistant Cylindrical.	4
	b)		Discuss the various factors influencing the choice of the following in Cartography.	
		i.	Map Projection.	3
		ii.	Scale.	2
		iii.	Symbol.	3

MAP MAKING: **[25 marks]**

As the Chief Cartographer, you have been given the task to come up with 2 maps using GIS. The 1st map is to show all universities in Zimbabwe and the 2nd to be a soil map for Zimbabwe.			
3.	a)	Describe the possible approach you would take in coming up with these two maps, and giving justification of your Map Design approach. In your answer, also list the map elements to be included in your maps.	15
	b)	For each map, state the possible contents of your Meta Data.	10

MAP COMPILATION AND DESIGN: **[25 marks]**

In this question, your answers should be based on the TECHNICAL METHODS FOR HIGHWAYS TMH11 (Version 3.0) STANDARD SURVEY METHODS document.

4. a) Using a Cross-section Diagram and, indicate the typical positions for city streets survey points. 5

b) Draw symbols of how you would depict the following on a Map: 20

SURVEY DATA	BOUNDARIES	FEATURES/ MISELLANEOUS	BUILDINGS AND TOPOGRAPHY
▪ Trig Beacon. ▪ Trig Bench Mark. ▪ Permanent Survey Station.	▪ International Boundary. ▪ Provincial Boundary. ▪ District or Municipal Boundary. ▪ Town or Farm Boundary. ▪ Standard Fence. ▪ Security Fence.	▪ Telephone line with two individual pole positions fixed by survey. ▪ Power line with two individual pole positions fixed by survey. ▪ Pylons. ▪ Underground power cables.	▪ Permanent Buildings. ▪ Temporary Buildings. ▪ Building under construction. ▪ Ruin. ▪ Monument. ▪ Windmill. ▪ Fuel Tank.

***NB:** for the purpose of this examination **only**, you may ignore issues of colour on your symbols.*

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