



**FACULTY OF ENGINEERING AND THE ENVIRONMENT
BACHELOR OF SCIENCE (HONORS) DEGREE IN GEOMATICS AND
SURVEYING**

CADASTRAL SURVEYING

MODULE CODE: EGS 3206

FINAL EXAMINATIONS: MAY 2023

DURATION : 3 HOURS

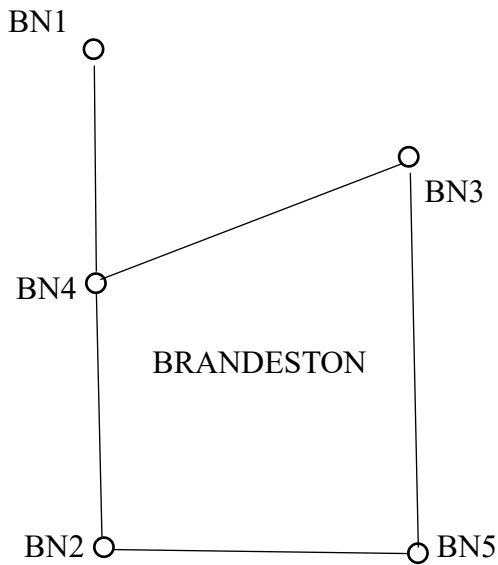
TOTAL MARKS : 100

EXAMINER'S NAME : O. MUROMO

INSTRUCTIONS

1. Answer **ALL** questions
2. Scientific calculators may be used

1			THE CADASTRE AND LAND TENURE (TOTAL 25 MARKS)	
	a)	(i)	State and describe the officially recognized forms of land tenure in Zimbabwe	8
		(ii)	Discuss the term “Tenure security”	10
	b)		Write an essay explaining the well-recognized criteria for measuring the actual or potential success of a Cadastre.	7
2			CADASTRAL SURVEYS ZIMBABWE (TOTAL 25 MARKS)	
			With the aid of a well-annotated diagram, describe the major cadastral processes and their associated legal instruments in Zimbabwe’s land registration system. Your answer must show the interlinkages between different processes.	25
3			BEACONS AND BOUNDARIES (TOTAL 25 MARKS)	
	a)	(i)	State the characteristics of beacons	5
		(ii)	Differentiate between Rectilinear and Curvilinear boundaries	5
	b)		Discuss the concept of beacons and boundaries as it relates to Zimbabwe. Your answer must include mention of the types of boundaries and their relevance to cadastral surveying in Zimbabwe.	15
4			ALIGNMENT OF BEACONS (TOTAL 25 MARKS)	
	a)	(i)	Define a high-density developed township	5
	b)		In the diagram (figure 1) BN4 (a beacon of BRANDESTON) the property under survey), is supposed to be on straight line boundary between BNI and BN2 which are well constructed farm beacons (i.e., BN4 was originally placed on line BN I - BIN2).	



Certain beacons have been surveyed in the present survey with coordinates as follows:

	Lo 29 ±0.00	meters	+1973 000.00
BN2	+280.387		+8393.525
BN3	-3722.042		+1333.154
BN4	+439.457		+7222.871

BIN1 as determined on the Trig. System in a previous survey is

BN1	+1008.260	+3049.870
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	(i)	Is BN4 considered to be offline in terms of the Land Survey Regulations?	5
	(ii)	Must it be moved onto the line according to the regulations?	5
	(iii)	Can coordinates of BN I be adopted from the previous survey, or should they be surveyed again? (If so, assume identical coordinates for use in the calculation).	5
b)		What is the optimum position at which BN4 should be replaced? (Calculate this position whether or not you think it must be replaced in terms of the regulations.)	5

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