



UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA
FIRST SEMESTER EXAMINATIONS, NOV/DEC 2017

COURSE NO: GM 379

COURSE NAME: Cadastral Surveying

CLASS: BSc III

TIME: 3 hrs

Name: _____ Index Number: _____

Answer all questions in Section A and any other two in Section B

Section A

Q1

- What is a cadastral plan? Distinguish between *Cadastral* and *Site plans*?
- There are legal instrument governing the activities of most professions in Ghana. Discuss briefly the importance of laws, rules and regulations in the practice of surveying in Ghana.
- State the advantages of Regulation 3 (1) of the Survey Regulation 1989 (LI 1444) over that of Section 6(1) of the Survey Act 1962 (Act 127) in ensuring high accuracy of Cadastral surveys in the country.

LI (1444) Regulation 3 (1), *No plan of any parcel of land attached to any instrument for the registration of such instrument shall be accepted by the Chief Registrar of Lands or the Registrar appointed pursuant to the provisions of the Land Registry Act, 1962 (Act 122) unless the plan has been approved by the Director of Surveys or any official surveyor authorized in that behalf in accordance with regulation 2 of these Regulations.*

Act 127 Section 6 (1), *No person other than an official surveyor, a licensed surveyor, or any public officer making or preparing any plan in the course of his duties as such shall survey any land for the purpose of preparing any plan for attachment to any instrument of conveyance, leases, assignment, charge, or transfer.*

[25 Marks]

Section B

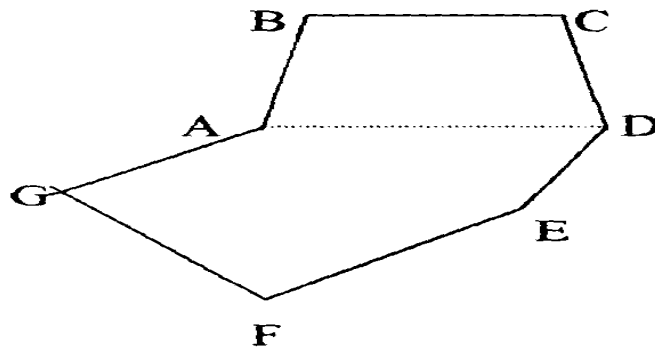
Q2

A traverse ABCDEFG was carried out using GNSS receivers to obtain the coordinates of the points provided in Table 1. Determine the area of the traverse ABCDEFG. If the plot is to be divided equally between two brothers Quae and Ayi such that the line of division passes through A and cuts the other boundary at H.

Table 1

Point	E (m)	N (m)
A	100.00	100.00
B	150.00	140.00

C	200.00	160.00
D	240.00	115.00
E	190.00	65.00
F	120.00	36.00
G	78.00	70.00



[25 Marks]

Q3

Given the coordinates of two control points, A and B, in a local and national coordinates systems as shown in Table 2, determine the coordinates of points C, D and E in the national coordinates system if their measured local coordinates are as provided in Table 2.

Table 2

Control Pt	X'	Y'	X	Y	Remarks
1	1160	1000	4628.4	3258.7	A
2	1550	984	5017.7	3240.9	B
3	2004	1282			C
4	1968	1365			D
5	2182	0374			E

Also calculate the angle of rotation and the scale factor between the local and the National Coordinates Systems.

[25 Marks]

Q4

The 2016 year group of Geomatic Engineering student have been tasked to demarcate, survey and prepare boundary plans for the purpose of Land Title Registration in Accra. Outline the procedures and equipment you would use to carry out the project knowing that only one survey beacon is found close to the site. Also provide information required for the project report and indicate the precautionary measures that would be adopted to ensure that required standards are achieved.

[25 Marks]

Dr C. Boye/Issaka