



# UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

## FIRST SEMESTER EXAMINATIONS, NOV/ DEC 2018

COURSE NO: GL 125

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COURSE NAME: LAND SURVEYING

CLASS: GL 1

TIME: 3 HRS

Name: \_\_\_\_\_ Index Number: \_\_\_\_\_

### **Attempt All Questions**

#### **Question 1 (A total mark of 20 is to be awarded)**

1. (a) The following are observed fore bearing of a line. Find their back bearing?

(i) *Fore Bearing AB* =  $32^{\circ}34'$

(ii) *Fore Bearing BC* =  $13^{\circ}46'$

(iii) *Fore Bearing CD* =  $184^{\circ}29'$

(iv) *Fore Bearing DE* =  $337^{\circ}52'$

[Question 1 (a) - 4 marks]

(b) State and describe the stages of survey operations

[Question 1 (b) - 10 marks]

(c) Outline three characteristics of systematic and random errors

[Question 1 (c) - 6 marks]

#### **Question 2 (A total mark of 20 is to be awarded)**

2. (a) Enumerate four (4) significant advantages of GPS

[Question 2 (a) - 4 marks]

(b) Discuss the four (4) basic steps of working with an EDM.

[Question 2 (b) - 10 marks]

(c) What are three segments of a GPS? Discuss

[Question 2 (c) - 6 marks]

**Question 3 (A total mark of 20 is to be awarded)**

Stn	Levels			Height		Initial RL	Adj.	Final RL	Remarks
	BS	IS	FS	Rise	Fall				
A	2.432								TBM1 100.000
1		3.446							
2		3.013							
3		2.006							
B	2.689		0.847						CP
4		2.784							
C	0.974								CP
5		0.832							
D			0.168						TBM2 103.419

3. (a) Complete the table where appropriate to obtain final reduced levels for every point?

**[Question 3 (a) - 16 marks]**

(b) What is the misclose?

**[Question 3 (b) - 1 mark]**

(c) Perform appropriate checks for the rise and fall method of reduce level computataion?

**[Question 3 (c) - 3 marks]**

*Examiner: S. Mantey*