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OBAFEMI AWOLOWO UNIVERSITY
FACULTY OF ENVIRONMENTAL DESIGN AND MANAGEMENT
DEPARTMENT OF ESTATE MANAGEMENT
2011/2012 HARMATTAN SEMESTER EXAMINATIONS

COURSE TITLE: ESM 203: Land Surveying I TIME ALLOWED: 2 Hours

INSTRUCTION: Answer any **three** questions

1. (a) Effort made during reconnaissance is an effort in futility. Comment on this statement (5 mks).

(b) Surveying and Geoinformatics is bedrock of national development. Validate or invalidate this assertion (15mks)

3 (a) Categorize and discuss extensively various sources of errors in chain surveying. (12 mks)

(b) The principle of chain surveying requires that an area be divided into series of triangles. Why is triangle preferred to quadrilateral? (4 mks)

(c) How will you continue chaining across a pond? (4 mks)

3 (a) The following are the observed bearings of the lines of a compass traverse ABCDEA where local attraction was suspected.

Line	Length (m)	Forward bearing	Back bearing
AB	85	191° 45'	13° 00'
BC	91	39° 30'	222° 30'
CD	154	22° 15'	200° 30'
DE	119	242° 45'	62° 45'
EA	98	330° 15'	147° 45'

Find the correct bearings of the lines and show the necessary corrections applied. (10mks)

(b) State in a systematic order how you will plot the data above using an AutoCAD software (Specify the AutoCAD version you have adopted (6 mks)

(c) When will you recommend or decline to recommend the adoption of compass surveying method? (4 mks)

4. (a) There are some similarities and differences in the design of a Theodolite and a Level. Clearly outline four of these similarities and also identify two major differences in their design. (12mks)

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- (b) Explain the reason for centring a longitudinal or circular bubble in survey equipment e.g. Level or Theodolite? (5mks)
- (c) Briefly describe how you will measure a line of about 120 metres assuming you have a 30metre tape and four ranging poles. (3mks)
5. (a) Give a concise description of Global positioning System (GPS) with specific mention of its segments, principles of operation and limitations (10 mks)
- (b) State three advantages which GPS traversing has over Theodolite traversing surveying? (4 mks)
- (c) Differentiate between longitudinal leveling and cross-sectional leveling (6 mks)

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