

2312/305
CADASTRAL SURVEYING AND
LAND LAW
Oct./Nov. 2021
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN LAND SURVEYING

CADASTRAL SURVEYING AND LAND LAW

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Scientific calculator.

This paper consists of EIGHT questions in TWO sections; A and B.

Answer FIVE questions, choosing THREE questions from section A and TWO questions from section B.

Maximum marks for each part of a question are as indicated.

Candidates should answer the questions in English.

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This paper consists of 5 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A: CADASTRAL SURVEYING

Answer **THREE** questions from this section.

1. (a) (i) Define the term "cadastre" as used in cadastral surveying.
(ii) State the function of **three** types of cadastres;
(iii) Name the **two** parts of a cadastre pointing out the function of each. (10 marks)
- (b) Define the term "boundary" as used in law. (2 marks)
- (c) Explain the term "Fixed boundary" under the following:
(i) General definition;
(ii) Torren's system;
(iii) English system. (8 marks)
2. **Figure 1** shows a parcel of land whose corner beacons are G11, G12, G2, G3 and G9. If the coordinates for G9 are $-515.18(N)$ and $-302.45(E)$, use the information on the figure to compute,
(i) coordinates of G11, G12, G2, and G3;
(ii) the area of the parcel in hectares using the coordinate method. (20 marks)

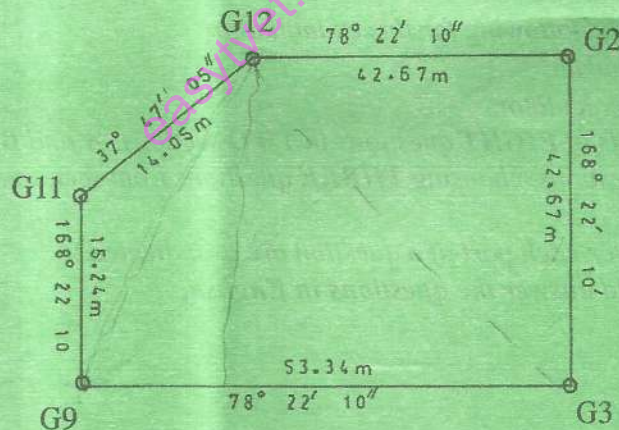


Fig.1

3. **Table 1** shows data collected from a ray trace traverse between old beacons W_6 and H_2 . Use the data and the datum coordinates in **table 2** to compute:
- (i) Swing(θ) and scale factor (k).
 - (ii) Corrected bearings and distances for the traverse lines. (20 marks)

Table 1

Line	Bearing	Distance (m)
W6 - TP1	329° 01' 09"	67.227
TP1 - TP2	06° 22' 43"	99.962
TP2 - TP3	40° 33' 18"	101.759
TP3 - TP4	04° 05' 35"	105.032
TP4 - H2	303° 25' 23"	99.331

Table 2: Datum Coordinates

Point	N (m)	E
W6	-147912.146	-29063.323
H2	-147518.260	-29096.233

4. **Figure 2** shows a parcel of land to be surveyed to cadastral standard. If the coordinates of point Y are $-45670.45(N)$ and $+38811.50(E)$, derive the theoretical coordinates for points P_1, P_2, P_3, P_4 and P_5 . (20 marks)

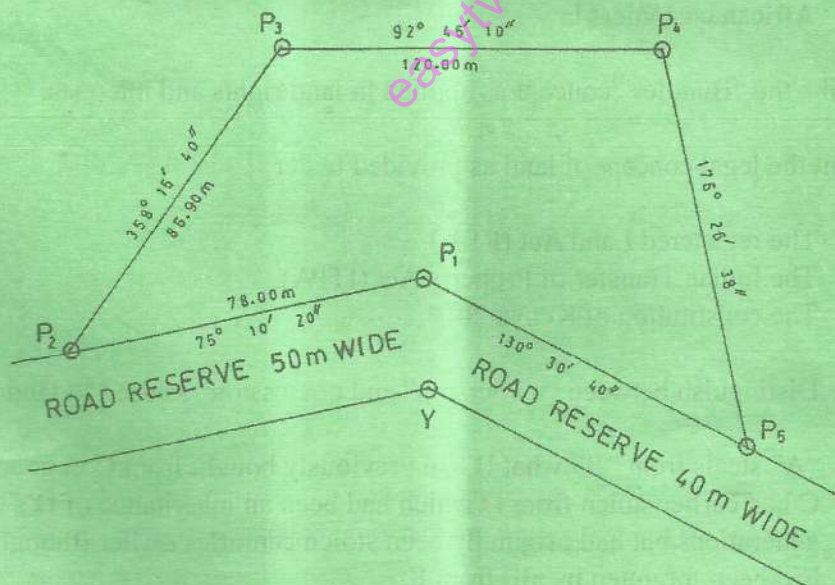


Fig.2

5. (a) Explain the following as captured in the surveyor's report in a cadastral file:
- (i) method of survey;
 - (ii) old beacons found;
 - (iii) survey of natural boundary. (8 marks)
- (b) List six pieces of information shown in a deed plan. (3 marks)
- (c) Explain the purpose of carrying consistency checks in a cadastral plan. (4 marks)
- (d) Define the term "mutation survey" as used in cadastral surveying giving three examples. (5 marks)

SECTION B: LAND LAW

Answer TWO questions from this section.

6. (a) Outline three classification of law. (6 marks)
- (b) Explain how the following sources of law are applied in Kenya:
- (i) The constitution;
 - (ii) African customers law. (8 marks)
- (c) Describe the "Bundles" concept as applied in land rights and interests. (6 marks)
7. (a) Explain the legal concept of land as provided under:
- (i) The registered Land Act (RLA).
 - (ii) The Indian Transfer of Property Act (ITPA).
 - (iii) The constitution of Kenya 2010. (6 marks)
- (b) (i) Distinguish between "ownership" and possession" as used in land law.
- (ii) "A" steals from "B" what B had previously bought from C in good faith. C had earlier stolen from D which had been an inheritance of D's family for generations but had originally been stolen centuries earlier (though this had been forgotten by all) from E.
Explain the relationship between A, B, C, D and E in terms of ownership and possession. (8 marks)
- (c) State six items that are kept in a land registration unit. (6 marks)

8. (a) State the functions of the following in the adjudication team:
- (i) demarcation officer;
 - (ii) survey officer. (4 marks)
- (b) Explain the provisions of the following Acts of Parliament in relation to fixed boundaries:
- (i) Registered Lands Act (RLA);
 - (ii) Registration of Titles Act (RTA). (6 marks)
- (c) Compare the process of registration of land under the following statutes:
- (i) Registration of Documents Act (RDA);
 - (ii) Government Lands Act (GLA). (10 marks)

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