NAMIBIA SENIOR SECONDARY CERTIFICATE

GEOGRAPHY HIGHER LEVEL

8330/3

PAPER 3

1 hour 45 minutes

Marks 60

2013

Additional Materials: Answer book
Protractor
Ruler

INSTRUCTIONS AND INFORMATION TO CANDIDATES

- Write your answers and working in the separate answer book provided.
- Write your Centre Number, Candidate Number and Name on all the work you hand in.
- Write in dark blue or black pen.
- You may use a soft pencil for any diagrams or graphs.
- Do not use staples, highlighters or correction fluid.

- Answer **all** questions

- The Insert contains **Fig. 1** for Question **1 (a) (i)**, **Fig. 3** for Question **3 (b)**, **Fig. 4** (data sheet) for Question **3 (c) (ii) & (v)** and **Fig. 5** for Question **3 (c) (v)**.
- The number of marks is given in brackets [ ] at the end of each question or part question.
- All working must be clearly shown.

This document consists of **6** printed pages, **2** blank pages and **1** Insert.

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1 Fig. 1 (Insert) shows villages around Town **A**.

Twenty people were questioned in each village shown in Fig. 1 and asked whether or not they normally used Town **A** for 15 different services. The answers were then averaged out for each village.

A number of methods may be used to define the sphere of influence of a town.

Fig. 1 (Insert) shows the results of a questionnaire used to define the sphere of influence of Town **A**.

(a) An isoline for the value of 9 has been drawn on Fig. 1 (Insert).

Complete the diagram by adding isolines to show the values 3, 5 and 8. [3]

(b) Four of the services listed in the questionnaire were a clothing store, a general store, a library and a bank.

Suggest **three** other services that might have been included in the questionnaire to help determine the sphere of influence of Town **A**. [3]

(c) What factors might influence the shape and size of the sphere of influence of a town such as Town **A**? [6]

[12]

2 Fig. 2 shows an area of land with two rock types, **A** and **B**. The map is covered with a grid, numbered from 0 - 100. Three different types of sampling methods were used to sample land use in the farming area composed of the two rock types **A** and **B**.

An area of land with two rock types A and B.

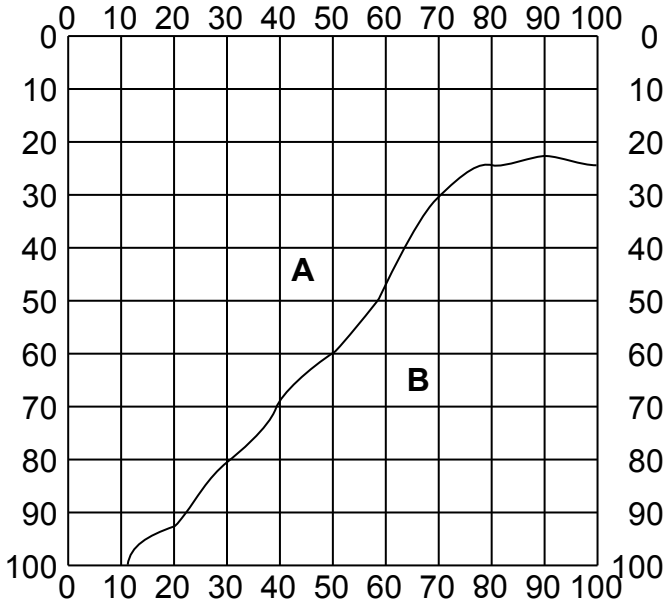
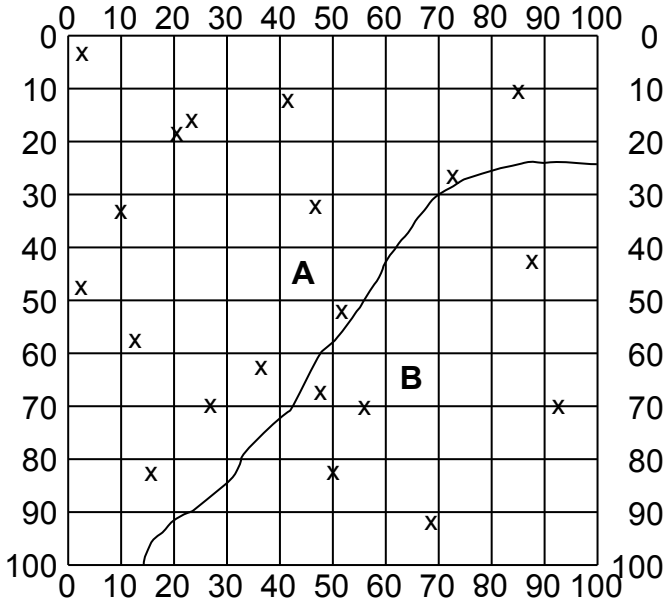


Fig. 2

Twenty sample points were chosen.

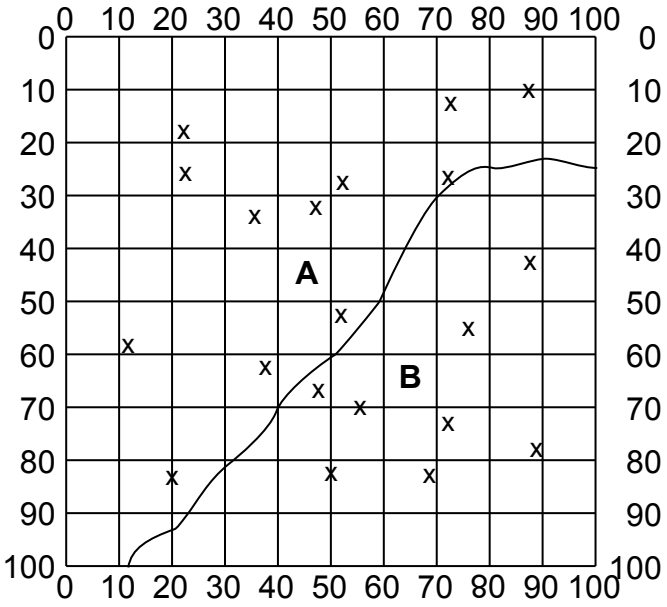
Sampling type I, II and III show three different types of sampling methods.

sampling type I

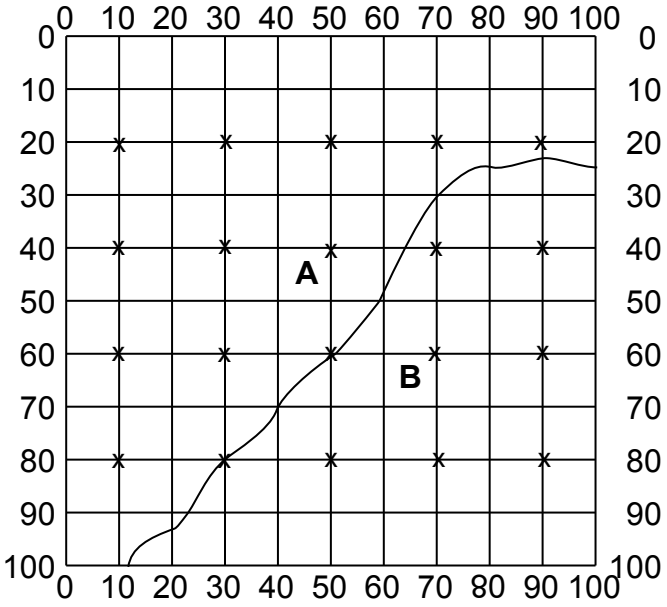


sampling type II

This sampling type include young and old farmers as well as large and small farms



sampling type III



(a) Identify each of the sampling methods indicated as **I**, **II** and **III**. [3]

(b) Explain briefly how each sampling method shown can be used to survey the land use of an area. [3]

(c) Give **one** advantage and **one** disadvantage for each of these three sampling methods. [6]

[12]

3 A group of geography students collected data at a number of locations along part of a small stream and parts of the surrounding area.

The students measured the gradient of a slope adjacent to the river and recorded the data. The data is shown in **Table 1** below.

Table 1

Slope measurements		
Slope Section	Length of slope measured (m)	Angle of slope (^{O})
1	10	13
2	15	2
3	11	9
4	11	6

(a) How would you measure the gradient of the area presented by the data shown in **Table 1**? [3]

(b) On the space provided in Fig. 3 (Insert), use the scale suggested and the data provided in **Table 1** to accurately draw (reconstruct) the profile of the slope. [5]

(c) The data sheet (field sheet) Fig. 4 (Insert**)** shows the different data the students collected and recorded during a field study.

(i) Describe the equipment required to measure depth and velocity. [2]

(ii) Describe how the stream depth would be measured. [4]

(iii) Describe how stream velocity would be measured. [3]

(iv) Using the data given in Section 1 (data sheet, Fig. 4, Insert), calculate the average velocity of the stream. [1]

(v) Explain briefly why the average time is multiplied by 0.85. [1]

(vi) Use the data in Fig. 4 (Insert**)** to calculate

A: the cross-sectional area of the stream. [2]
B: the discharge of the stream. [1]

(vii) On the graph outline given in Fig. 5 (Insert), use the scale suggested and the data provided in Section 2 (data sheet, Fig. 4, Insert), to accurately draw the cross-section. [4]

(d) Fig. 6 shows river cross-sections, showing isovels (isolines of stream velocity).

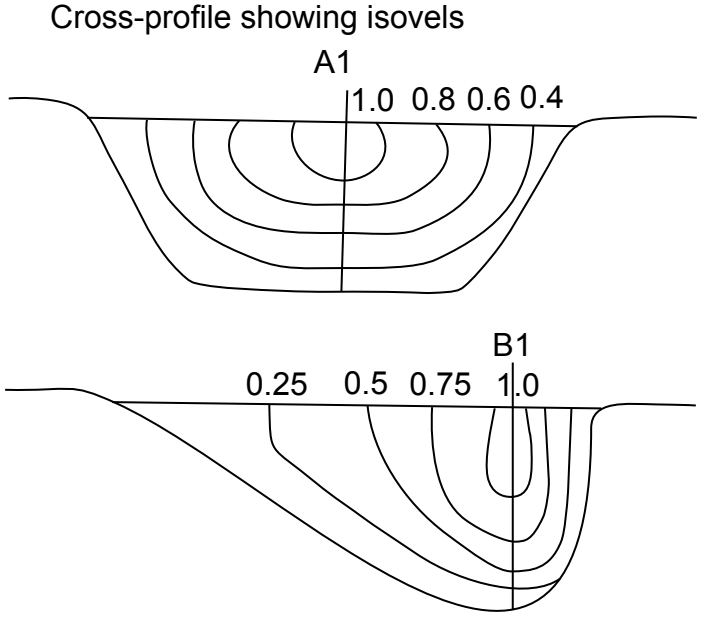


Fig.6

Describe and explain the similarities and differences in the velocity shown. [4]

(e) Information was also obtained by fieldwork on pebbles found in a dry valley.

What observations could be made of these deposits to determine the nature of the rivers' load and the size of the rivers when in flood? [3]

(f) Describe and explain the differences in size and shape of river material between the upper course and lower course of a perennial river. [3]

[36]

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