Centre Number	Candidate Number	Candidate Name

NAMIBIA SENIOR SECONDARY CERTIFICATE

GEOGRAPHY HIGHER LEVEL

8330/3

PAPER 3

1 hour 45 minutes

Marks 60

2017

Additional Material: Non-programmable calculator
Protractor
Ruler

INSTRUCTIONS AND INFORMATION TO CANDIDATES

- Write your Centre Number, Candidate Number and Name in the spaces at the top of this page.
- Candidates answer on the Question Paper in the spaces provided.
- Write in dark blue or black pen.
- You may use a soft pencil for any rough work, diagrams or graphs.
- Do not use correction fluid.
- Do not write in the margin *For Examiner's Use.*

- Answer **all** questions**.**

- All working must be clearly shown.
- Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

- The number of marks is given in brackets [ ] at the end of each question or part question.

For Examiner's Use		
1		
2		
3		
4		
Total		

Marker		
Checker		

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Republic of Namibia
MINISTRY OF EDUCATION, ARTS AND CULTURE

[Turn over

1 **(a)** One method which is used to collect information for field work studies involves interviews with people and asking a number of questions, using a questionnaire survey.

(i) Explain why, in this type of survey, interviews are often held with a sample of the people involved and not with all of them.

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..... [3]

(ii) Describe **two** sampling methods which could be used to select people to be interviewed.

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(iii) Explain why, when a questionnaire is to be used, a pilot survey is often carried out in the first instance.

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(b) Study Fig. 1 and Fig. 2, which show the result of a survey in which visitors to an urban park, were interviewed and asked questions.

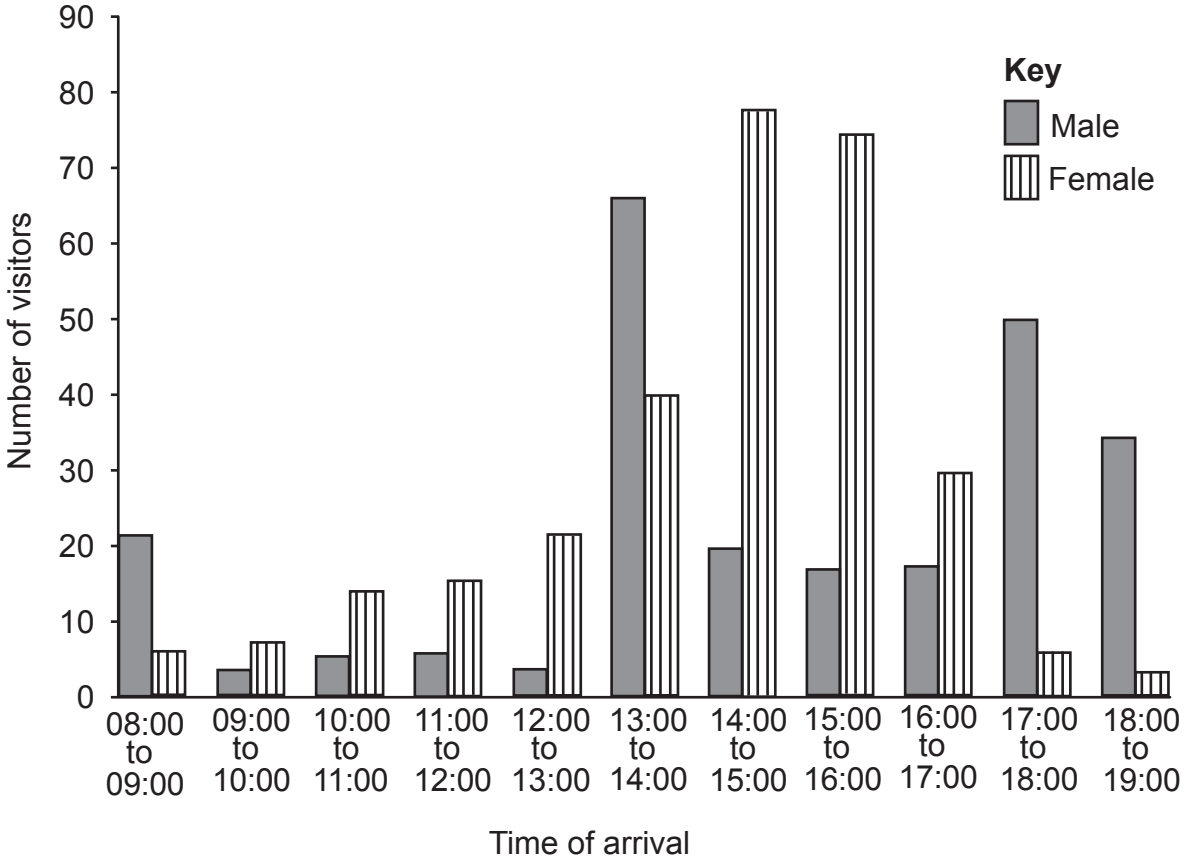

Fig. 1

(i) Suggest when, should a person have been interviewed to obtain the information required? Give **one** reason to explain your answer.

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[Turn over

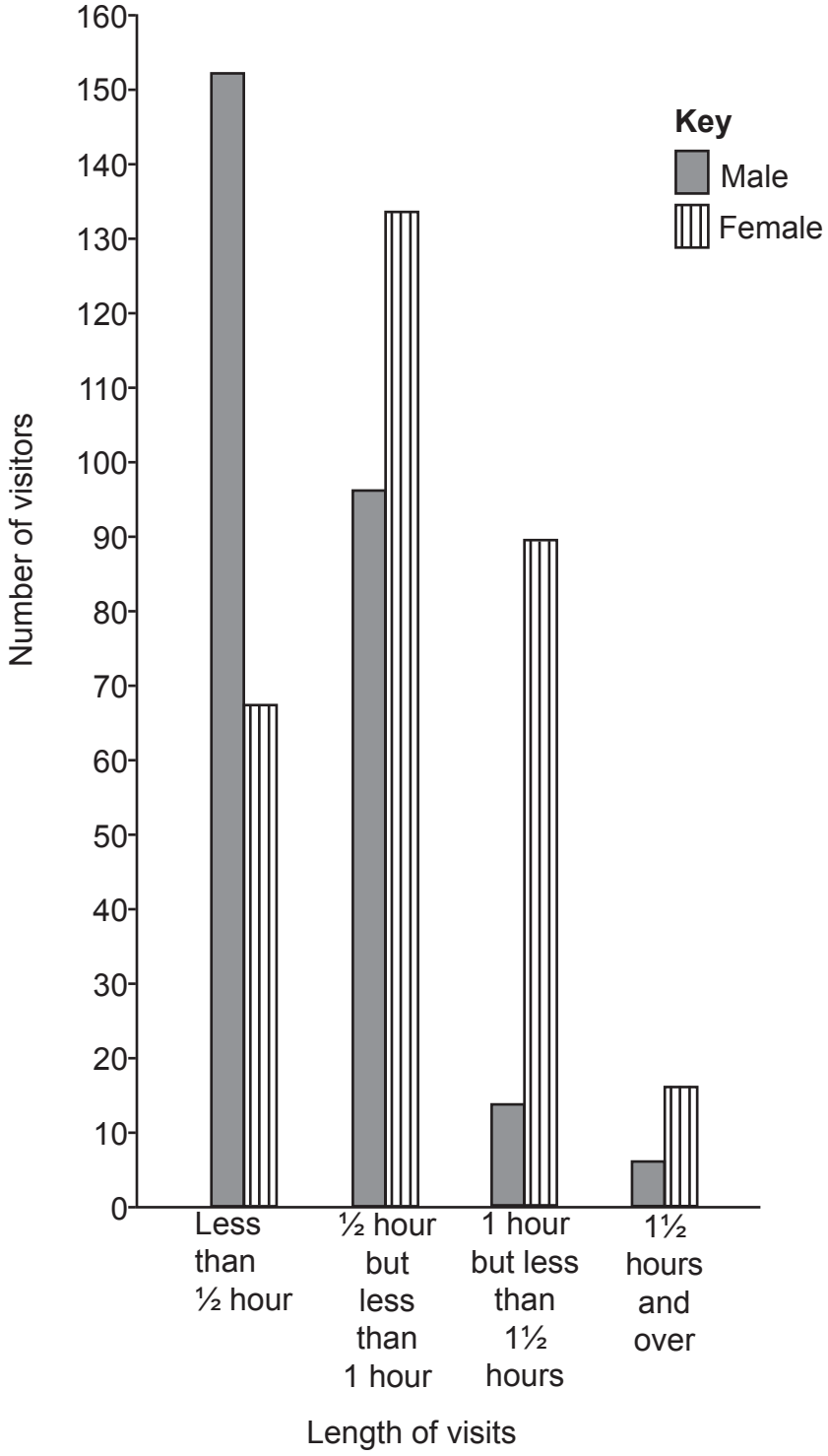
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
Number of visitors
Key
Male
Female
Less than ½ hour
½ hour but less than 1 hour
1 hour but less than 1½ hours
1½ hours and over
Length of visits

Fig. 2

(ii) For each of the two diagrams, Fig. 1 and Fig. 2, state the question which would most likely have been asked to obtain the information for the time of arrival and the length of visit.

Fig. 1 .....

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Fig. 2 .....

..... [2]

(iii) State **one** detail which should have been recorded but for which a question was not necessary.

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(iv) Describe the main differences in the patterns of the visits made to the park by males and females.

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[18]

2 Study the information given about a town.

> In the centre of the town a number of service industries such as shops and banks are situated. This area is surrounded by high density housing with the exception of one district where manufacturing industries are located. On the outskirts of the town there are a number of separate areas with either low density or medium density housing. There is also one area on the edge of the town where a modern estate has been developed.

Imagine that you have been asked to supervise a group of Geography students who are required to carry out a survey of land use in the town. The students are required to obtain information by observation of the different types of land use. The information will then be used to produce a map of the land use zones.

(a) State the equipment and the resources which the students would need to carry out the survey.

1 .....

2 ..... [2]

(b) Explain how the survey would be carried out by the students, including the details on which decisions would need to be taken before the survey could begin.

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For Examiner's Use

(c) Explain how the information collected by the students would be used to produce a map to show the land use zones.

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[12]

3 A group of Geography students investigated downstream changes in a small river as distance from the source increased. Three sites, A, B and C, were visited at increasing distances from the source of the river. The results of the investigation are shown in Table 1.

Table 1

	Site A	Site B	Site C
Distance from the source (km)	9	15	27
Height above sea-level (m)	450	250	88
Average pebble size (cm)	16	11	6.5
Velocity (m/sec)	0.35	0.59	0.42

(a) (i) Using a map, the students found the height above sea-level at each site.

Use the data from Table 1 to draw an accurate long profile line graph on Fig. 3 to show the changing height above sea-level of the river from the source to Site C. [4]

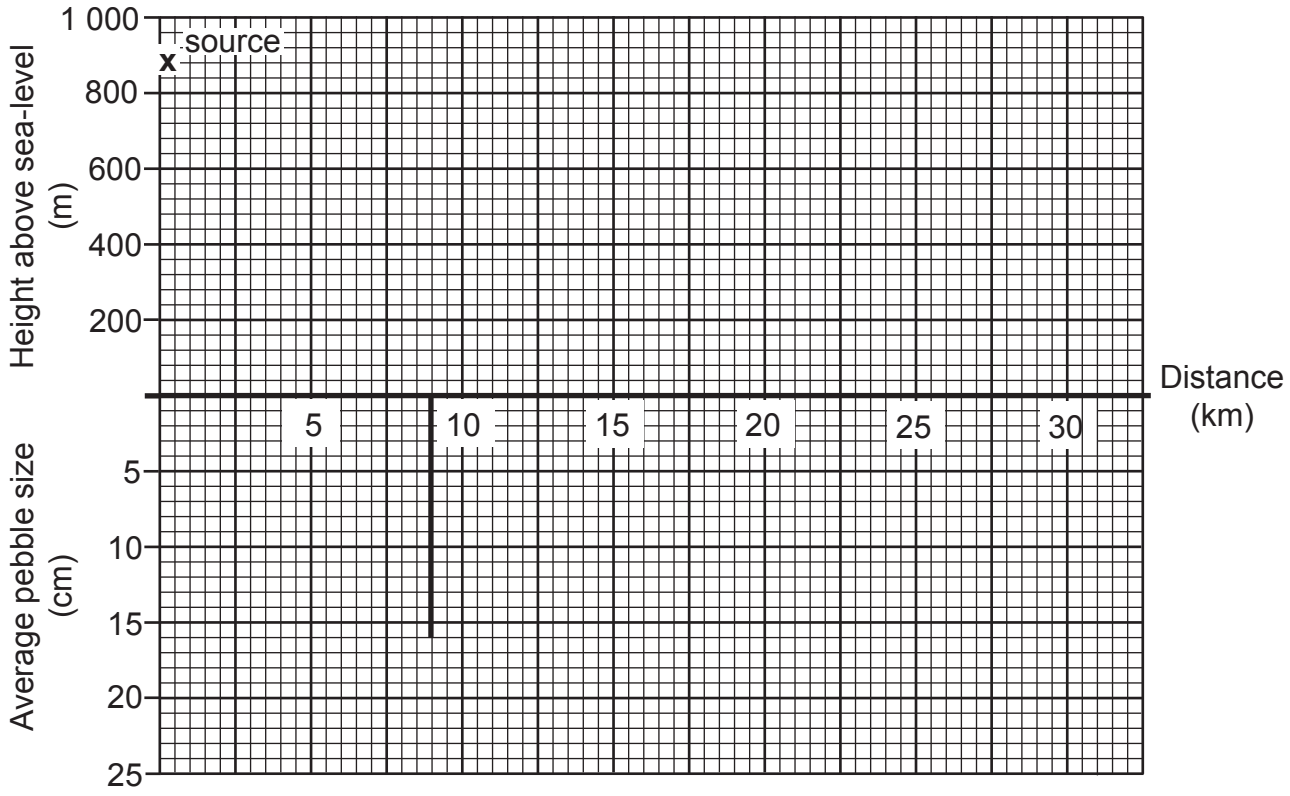

Fig. 3

(ii) The students discussed long profiles and river features such as waterfalls, flood plains, rapids and ox-bow lakes.
List **two** river features which the students might expect to see at Site A and **two** features at Site C.

Site A 1 .....

2 ..... [1]

Site C 1 .....

2 ..... [1]

(b) Each student randomly selected ten pebbles at each site. The pebbles were chosen at random by a student walking in the river stepping in different directions. After each step, the pebble closest to the end of the foot was picked up and measured.

(i) Using the results in Table 1, complete the bar graph on Fig. 3 to show the average pebble size for Site B and Site C. The result for site A is already plotted on Fig. 3. [2]

(ii) What do the results show about the size of pebbles from Site A to Site C?

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..... [1]

(iii) Suggest **two** reasons for your answer in **(b) (ii)**.

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2 .....

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(iv) Why might this random method of collecting pebble sizes be considered an unreliable method?

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..... [1]

(v) Suggest how the students could obtain a more representative sample of results if the investigation was repeated.

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..... [2]

(c) Study Table 1 again. The velocity at each site was also recorded and the results shown in Table 1.

(i) Describe the changing pattern of velocity from Site A to Site C.

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..... [1]

(ii) Water was extracted by a bottling factory upstream from Site C.

Suggest how and why this

- changed the velocity readings at Site C.
- affected deposition at Site C.

Velocity.....

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Deposition .....

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..... [4]

(d) Stating data evidence from Table 1 and Fig. 3, write a conclusion to the investigation about the changes in this small river as distance from the source increased.

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[23]

4 An investigation is also to be made of a number of dry valleys which once contained rivers.

As part of the preparation, a large-scale map has been obtained of the area containing the dry valleys. Fieldwork is also to be undertaken.

(a) Describe how information from the map may be used to draw long profiles to show changes in gradient along the valley floors.

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..... [3]

(b) Information is also to be obtained by fieldwork on the rock particles left on the valley floors by the rivers when they flowed through the valleys.

What measurements and observations could be made of these deposits to determine the nature of the load and the size of the channel when the rivers flowed?

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