Centre Number	Candidate Number	Candidate Name

NAMIBIA SENIOR SECONDARY CERTIFICATE

GEOGRAPHY ORDINARY LEVEL 4332/3

PAPER 3 2 hours

Marks 60 **2017**

Additional Materials: Non-programmable calculator
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** the 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.
- You may use a non-programmable calculator.

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1		
2		
Total		

Marker		
Checker		

This document consists of **12** printed pages.

Republic of Namibia

MINISTRY OF EDUCATION, ARTS AND CULTURE

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1 Geography learners decided to do an investigation on maximum and minimum temperature at two locations for seven days during April. Location **A** is located at a height of 600m above sea level and location **B** at a height of 20m above sea level. They divided themselves into two groups to take the measurements. Measurements were taken the same time each day.

The learners did the investigation to test the following hypothesis.

Temperature decreases with an increase in altitude.

(a) Fig. 1 shows an instrument used to obtain the maximum and minimum temperatures at both locations.

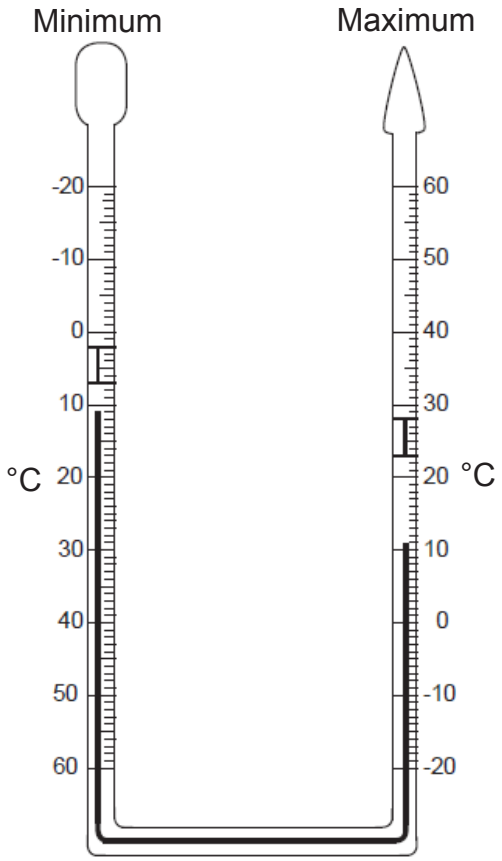

Fig. 1

(i) Name the instrument shown in Fig. 1.

..... [1]

(ii) What is the minimum and maximum temperatures, as shown in Fig. 1?

Minimum.....

Maximum..... [2]

(iii) State the actual temperature from Fig. 1.

..... [1]

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(iv) At what time of the day should the learners take the temperature readings? Explain your answer.

Time ..... [1]

Explanation

.....

.....

..... [2]

(b) Table 1 shows the readings of temperature recorded by the learners for both locations.

Table 1

Location A				Location B			
Day	**Minimum temp.(°C)**	**Maximum temp.(°C)**	**Average temp.(°C)**	**Day**	**Minimum temp. (°C)**	**Maximum temp.(°C)**	**Average temp. (°C)**
1	6	23	14.5	**1**	4	20	12
2	10	30	20	**2**	5	25	15
3	15	35	25	**3**	10	26	18
4	7	28	17.5	**4**	3	19	11
5	11	32	21.5	**5**	6	21	13.5
6	12	16	14	**6**	2	18	10
7	9	31	20	**7**	4	20	12

Calculate the daily range of temperature for day 4, at locations **A** and **B**.

Location **A**.....

Location **B**..... [2]

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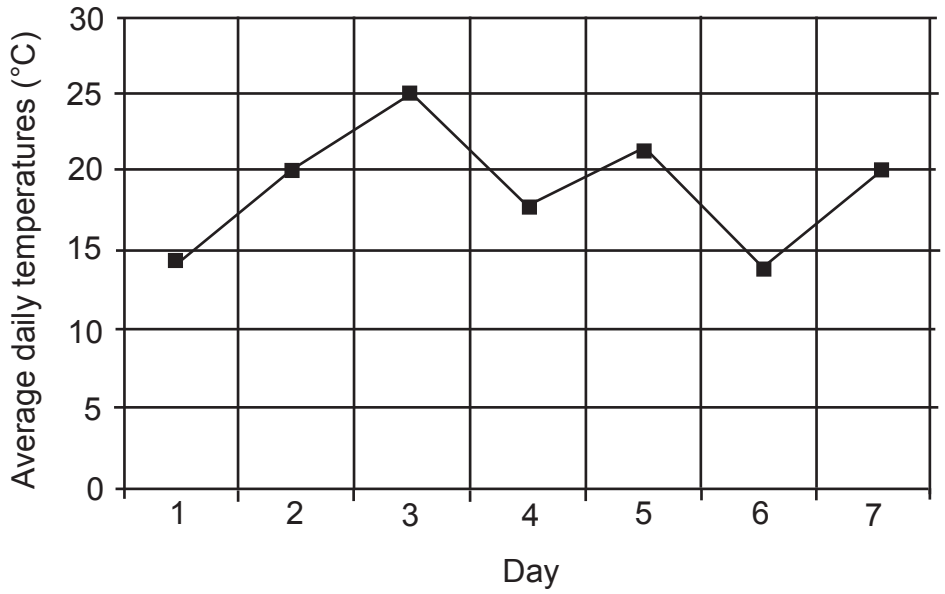
(c) Fig. 2, shows the average daily temperatures presented as a line graph for location **A**.

(i) Use the average daily temperature data to draw the line graph for location **B**. Use the key provided.



Key

Average daily temp. for location **A**

Average daily temp. for location **B** [4]

Fig. 2

(ii) Compare the average daily temperatures shown in Fig. 2.

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..... [2]

(iii) Write a conclusion to this investigation, stating whether you accept the hypothesis or not. Use the data from Table 1 to support you answer.

Conclusion .....

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Evidence .....

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..... [3]

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(d) Learners also undertook an investigation to determine the relationship between temperature and amount of rainfall received at location **A**. Table 2 shows part of a log book used for recording temperature and rainfall data at location **A**.

Table 2

Location A

Day	Temperature		Average temperature (°C)	Rainfall (mm)	Remarks
	Minimum (°C)	Maximum (°C)			
1	6	23	14.5	16	Light showers
2	10	30	20	-	-
3	15	35	25	-	-
4	7	28	17.5	3	Drizzles
5	11	32	21.5	-	-
6	12	16	14	22	Thundershowers
7	9	31	20	2	Drizzles

(i) Suggest a possible hypothesis for the study undertaken by the learners.

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..... [2]

(ii) Using the data for average temperature and rainfall shown in Table 2, describe the overall pattern of measurements for the 7 days.

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..... [3]

(iii) Explain why the average temperature on day 1 and day 6 is lower than on other days.

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..... [2]

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(iv) During the investigation only temperature and rainfall data was used.

Suggest practical methods by which the learners might have improved their investigation. You should consider the use of their weather instruments, data collection times and any other information that might improve the investigation.

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[30]

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2 An urban area has different land-use zones and functions. A group of Geography learners studied the variation in land use along two transects across their town. They divided themselves into two groups to do their survey, using the two main roads, **Loide Street** and **Simon Street**, running through the centre of the town.

They wanted to test the following hypothesis.

The land-use in the centre of the town is more commercial and consists of more multi-storey buildings, than on the edge of the town.

(a) Study Fig. 3, which shows how the learners have sampled 10 sites of 50 metres apart from each other, along **Loide Street** and **Simon Street**.

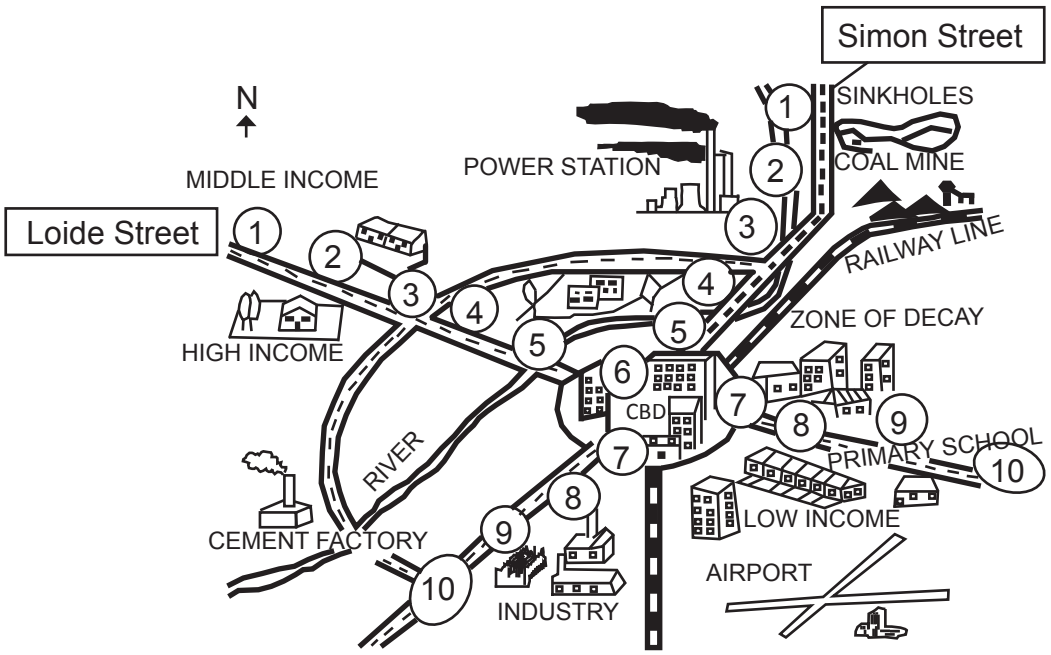

Fig. 3

(i) Name the type of sampling used by learners and give **one** advantage of this type of sampling.

Type .....

Advantage .....

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..... [2]

(ii) The sample sites were 50m apart. Calculate the length of the transect along Simon Street.

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..... [1]

(b) (i) List **three** pieces of equipment the Geography learners would have used to set up and conduct their survey.

1 .....

2 .....

3 ..... [3]

(ii) Describe how the Geography learners could have determined the exact land-use of the sites sampled.

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..... [4]

(c) Table 3, shows the information collected by the learners to indicate the land-use and height of each building at the sampled sites along the two transects.

Table 3

Loide Street			
Site	**Number of storeys Height of building**	**Building**	**Land-use**
1	1	House	Residential
2	1	House	Residential
3	1	Convenience store	
4	1	Church	Other
5	2	Flat	
6	3	Department store	Commercial
7	2	Office	Administrative
8	1	School	Administrative
9	1	House	Residential
10	1	House	Residential

Simon Street			
Site	**Number of storeys Height of building**	**Building**	**Land-use**
1	-	Mine	Industrial
2	2	Power station	Industrial
3	-	Vacant lot	Other
4	-	Golf course	Other
5	-	River	Other
6	3	Department store	
7	4	Bank	Commercial
8	-	Vacant lot	Other
9	1	Factory	
10	-	Vacant lot	Other

(i) Complete column 4 of Table 3 to show the missing land-use types, using the land-use terms in Table 3. [2]

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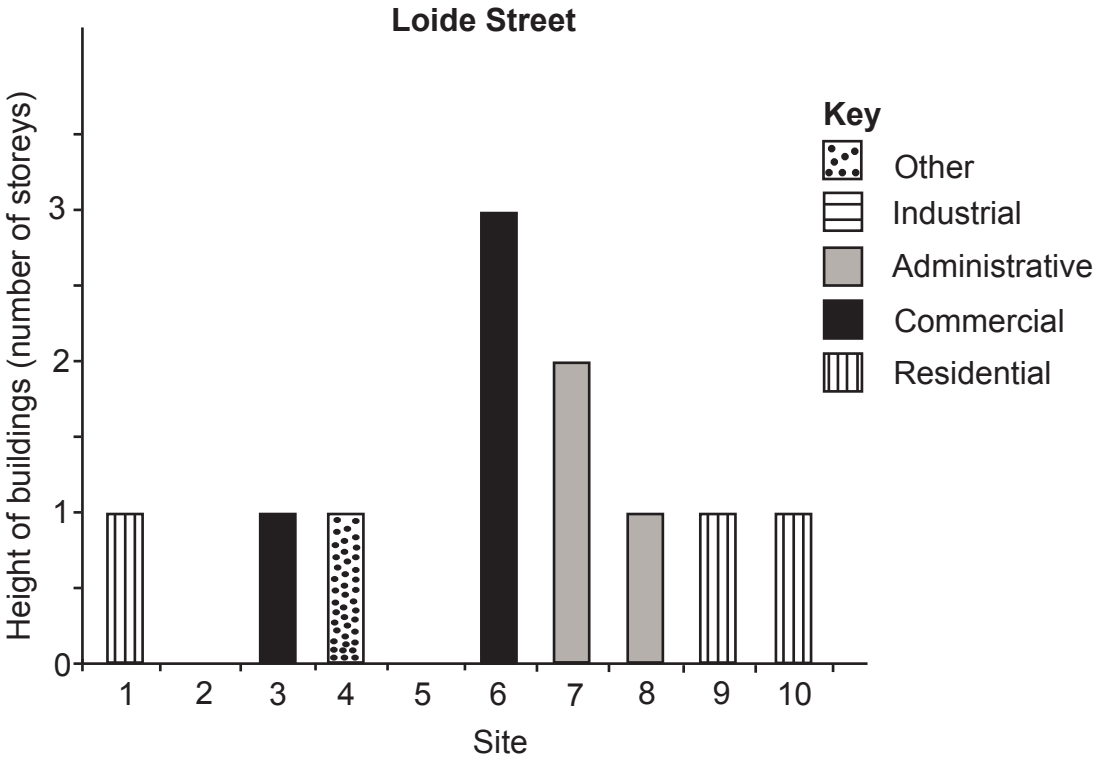
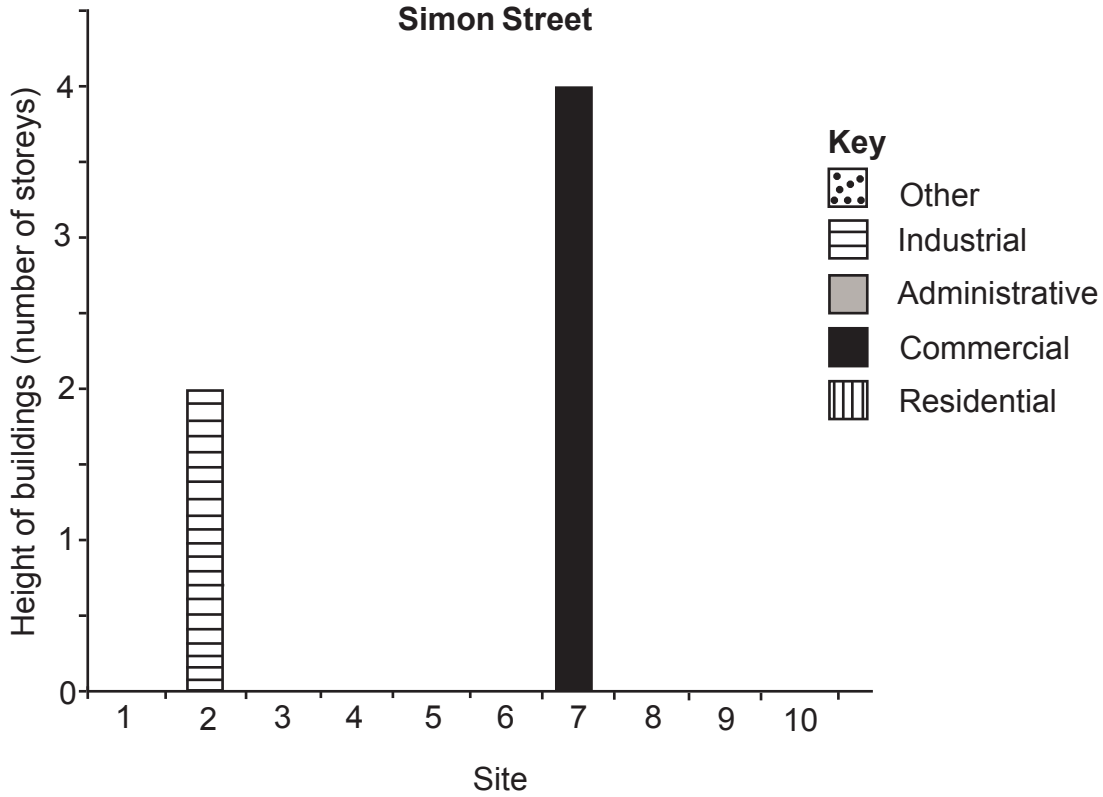
(ii) Fig. 4 shows the height and land-use of the buildings in Loide and Simon street.

Use the information from Table 3, to complete Fig. 4. Plot the height and land-use of the buildings at

- sites **2** and **5** of Loide Street
- sites **6** and **9** of Simon Street.





[4]

Fig. 4

(iii) With reference to the data shown in Table 3 and Fig. 4, contrast the pattern of land-use and height of the buildings for **Loide Street** and **Simon Street**.

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..... [4]

(d) (i) Look at the power station north of the CBD on Fig. 3 (Site 2, Simon Street). Give **two** reasons for this location.

1 .....

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2 .....

..... [2]

(ii) With reference to Fig. 3, suggest an environmental problem the inhabitants of the middle income residential area north west of the town will experience.

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..... [1]

(iii) Give **one** possible solution to the environmental problem mentioned in **(d) (ii)**.

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..... [1]

(e) (i) Use data from Fig. 3, Fig. 4 and Table 3 to write a conclusion to this investigation, stating whether you accept the hypothesis or not.

Use any data collected or processed during the investigation to support your answer.

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..... [4]

(ii) Give **two** reasons for the pattern of land-use for the two streets.

1 .....

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2 .....

..... [2]

[30]