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91010



910100



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SUPERVISOR'S USE ONLY

Level 1 Geography, 2016

91010 Apply concepts and basic geographic skills to demonstrate understanding of a given environment

9.30 a.m. Wednesday 16 November 2016

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Apply concepts and basic geographic skills to demonstrate understanding of a given environment.	Apply concepts and basic geographic skills to demonstrate in-depth understanding of a given environment.	Apply concepts and basic geographic skills to demonstrate comprehensive understanding of a given environment.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

Pull out Resource Booklet 91010R from the centre of this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–12 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

**High
Excellence**

TOTAL

24

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QUESTION ONE: Locations and Features

Read the following geographic concept and refer to it, as well as **Resources A and B** on pages 3 and 4 of the resource booklet, when answering (a).

Geographic Concept

Patterns may be spatial: the arrangement of features on the earth's surface; or temporal: how characteristics differ over time in recognisable ways.

- (a) (i) In which compass direction does the Clutha River/Mata-Au flow?

South

- (ii) Name the New Zealand Cycle trail that is graded the most "advanced".

The Old Abert Road

Refer to **Resource C** on page 5 of the resource booklet when answering (b).

- (b) (i) How long is the Clutha Gold Trail?

73km

- (ii) How many bridges cross the Clutha River/Mata-Au between the start and finish of the Clutha Gold Trail?

4

- (iii) Circle below the section of the Clutha Gold Trail that has the greatest change in altitude:

Roxburgh Dam
to Roxburgh

Roxburgh to
Millers Flat

Millers Flat to
Beaumont

Beaumont to
Lawrence

Refer to **Resource D** on page 6 of the resource booklet, when answering (c).

- (c) (i) What linear feature is found at 122497?

State highway 7

- (ii) What is the area reference (4-figure or AR) for the grid square where the Teviot River joins the Clutha River/Mata-Au?

1250

Read the following geographic concept and refer to it, as well as **Resources D and E** on pages 6 and 7 of the resource booklet, when answering (d).

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Geographic Concept

Environments may be natural and / or cultural. They have particular characteristics and features which can be the result of natural and / or cultural processes. The particular characteristics of an environment may be similar to or different from another environment.

Geographers use both maps and photographs when studying environments.

- (d) (i) Which of Resource D or Resource E is the more recent?

Resource E

Give at least ONE piece of evidence from the resources to support your answer.

On the topographic map there is a gravel pit south of the racecourse, but on the satellite photograph there is no gravel pit, and is replaced with an orchard

- (ii) Fully explain the usefulness of Resource D OR Resource E for geographers, when looking at the patterns of land use in Roxburgh East.

Include specific evidence from the resource to support your answer.

Resource D is useful for geographers because they can easily find patterns of land use in Roxburgh East with the map. The key on the map shows what each part of the map is. This helps finding patterns of land use because it tells us what each part is, so we can look at Roxburgh East and find what the land is being used for. Using the map, we can see that it is being used for orchards, a race course and an airstrip.

E8

QUESTION TWO: Climate and Patterns

Read the following geographic concepts and refer to them, as well as **Resource G** on page 8 of the resource booklet, when answering this question.

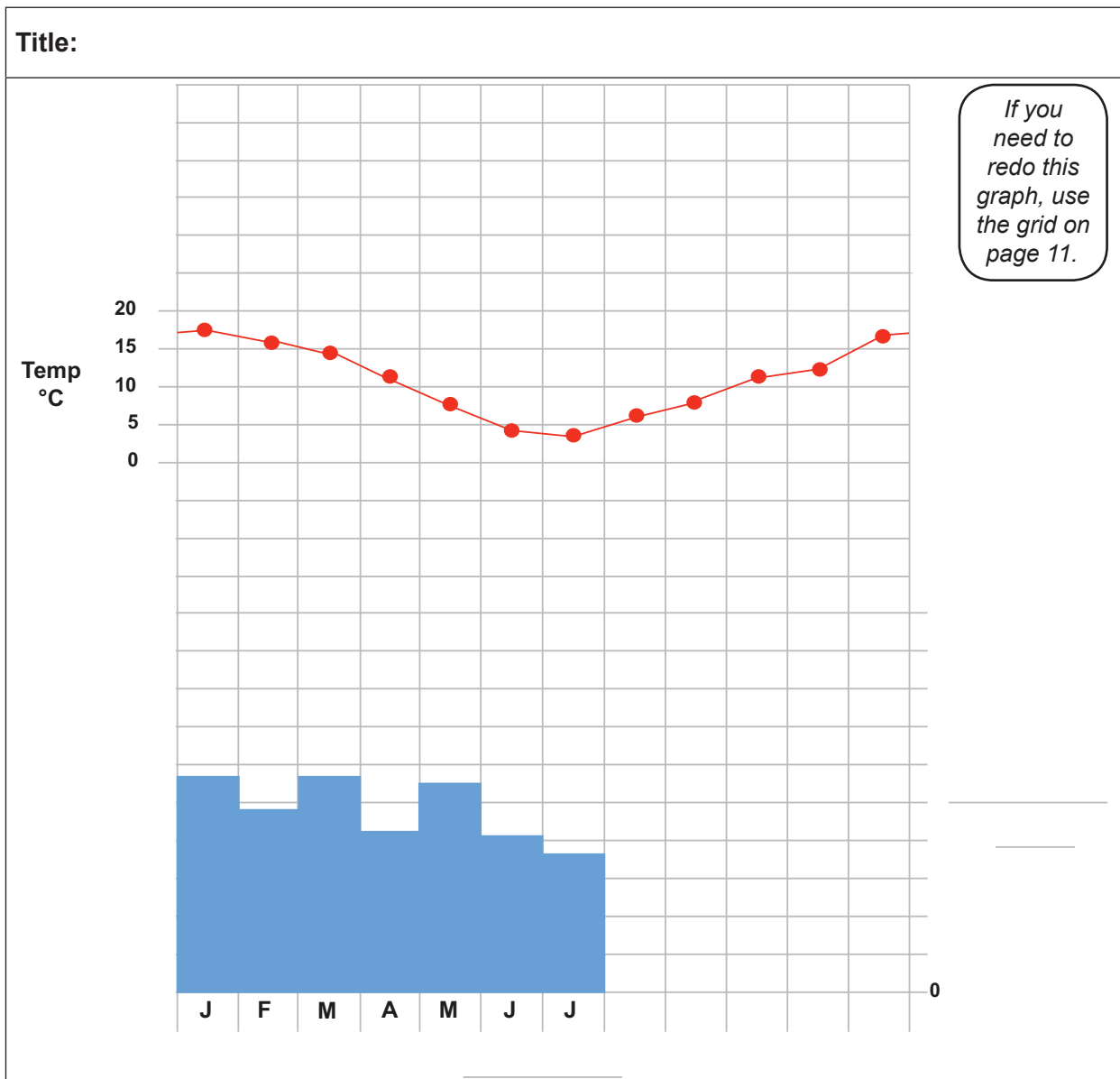
Geographic Concepts

Environments may be natural and / or cultural. They have particular characteristics and features which can be the result of natural and / or cultural processes. The particular characteristics of an environment may be similar to or different from another environment.

Patterns may be spatial: the arrangement of features on the earth's surface; or temporal: how characteristics differ over time in recognisable ways.

The climate of Roxburgh is ideal for growing fruits. The first stone fruit trees (red apricots) were planted in 1866. Apples have been grown commercially since the early 1900s. Both these types of fruit require cool winters to allow the fruit to set.

- (a) Complete the climate graph for the Roxburgh area below, using information from Resource G on page 8 of the resource booklet.



- (b) Calculate the total annual rainfall for the Roxburgh area.

566.8 mm

- (c) Calculate the average temperature for the Roxburgh area in summer.

10.23 mm (10.23) 15.9°C

- (d) Fully explain the pattern of temperatures and rainfall that the Roxburgh area experiences throughout the seasons.

Include specific information from Resource G on page 8 to support your answer.

During the summer, the Roxburgh area experiences their highest temperature and highest rainfall.

The average temperature in Roxburgh during the summer is 15.9°C which although is the highest average temperature out of all the seasons,

it is still fairly cold. During the summer, the total rainfall is 164 mm which is the highest total rainfall of ~~the~~ all the seasons.

During autumn, the Roxburgh area experiences lower temperature and rainfall. The average temperature during autumn is 11°C

which is almost 4°C under summer's average temperature. The rainfall is still high, but

has dropped from the total rainfall by 10.5 mm when compared to summer's rainfall.

During winter, the Roxburgh area experiences their lowest average temperature and

lowest rainfall. The average temperature

in Roxburgh during the winter is 5.3°C.

The total rainfall in Roxburgh during the winter

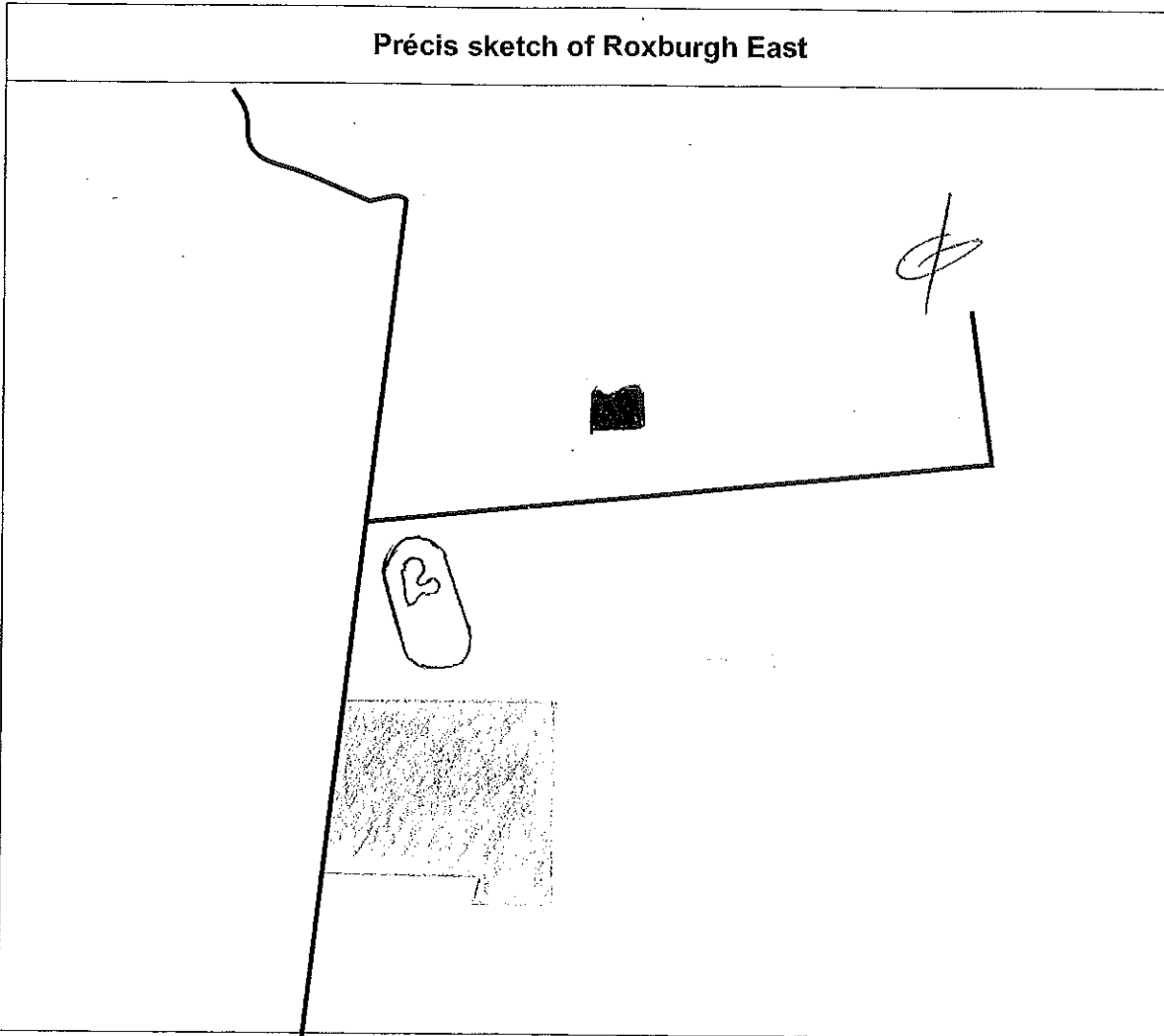
Part (d) continues on the next page




is 113.3 mm, and is the lowest total rainfall out of all the seasons. During spring, the total rainfall and average temperature has increased since winter. The average temperature is 11.1°C which is similar to the average temperature during autumn. The temperature is increasing each month. The total rainfall during spring is 136 mm which is an increase from winter, but is still lower than autumn's total rainfall //

QUESTION THREE: Sustainability

Refer to **Resources D–F** on pages 6 and 7 of the resource booklet, when answering (a).

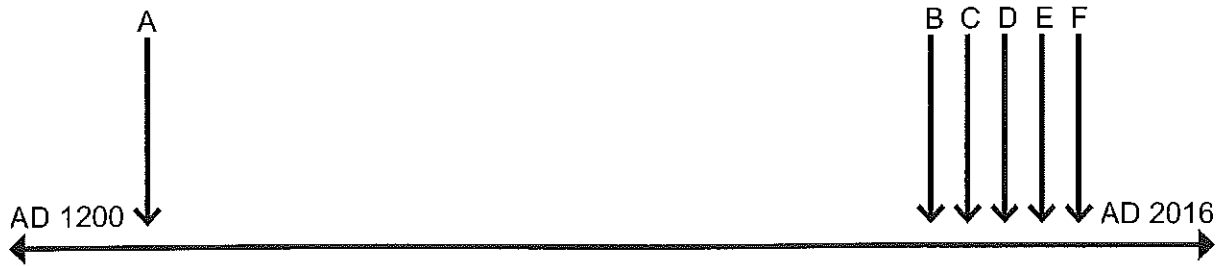
- (a) On the **précis sketch** below, **locate and label**:
- a storage dam north of Kinaston Road
 - the Roxburgh Racecourse
 - the area of orcharding south of the Roxburgh Racecourse (by shading it in).

**Key:**

	Storage dam north of Kinaston Road
	Roxburgh Racecourse
	Orchard area south of the Roxburgh Racecourse

Refer to **Resource A** on page 3 of the resource booklet, when answering (b).

The continuum below shows the use of land in the Roxburgh area in historical order.



- (b) Match the letter from the continuum above with the corresponding land use type in the table below.

Note: C and E have been done for you.

Land Use Type	
Apple growing	C
Moa hunting	A
Roxburgh Dam and Township	D
Clutha Cycle Trail	F
Gold dredging	B
Canning apricots (ceased)	E

Read the following geographic concepts and refer to them, as well as **Resources A-I** on pages 3–9 of the resource booklet, when answering (c).

Geographic Concepts

Kaitiakitanga means to “care for” the environment: sustainable use, management, and control of natural and physical resources that are carried out to the mutual benefit of people and resources. A kaitiaki is a guardian. This can be a person or group that cares for an area, such as a lake, forest, or river valley.

Sustainability involves adopting ways of thinking and behaving that allow individuals, groups, and societies to meet their needs and aspirations without preventing future generations from meeting theirs. Sustainable interaction with the environment may be achieved by preventing, limiting, minimising, or correcting environmental damage to water, air, and soil, as well as considering ecosystems and problems related to waste, noise, and visual pollution.

- (c) Fully explain how the concepts of kaitiakitanga and/or sustainability can be applied to the different types of land use in the Roxburgh area.

In your answer, include the geographic concept of kaitiakitanga and/or sustainability, and specific evidence from any of the resources on pages 3–9 of the resource booklet.

The concepts of kaitiakitanga and sustainability can be applied to the different types of land use in the Roxburgh area. This is because the people in the area were using the resources and land in Roxburgh sustainably and were making sure they were carrying out mutual benefit from the resources. This can be applied to the Roxburgh land use because the people in the area were using the land for gold dredging sustainably, growing apples in the Southern Orchards and taking care of the orchard by practicing sustainable farming ~~also~~ by spraying the apple trees only when necessary and removing

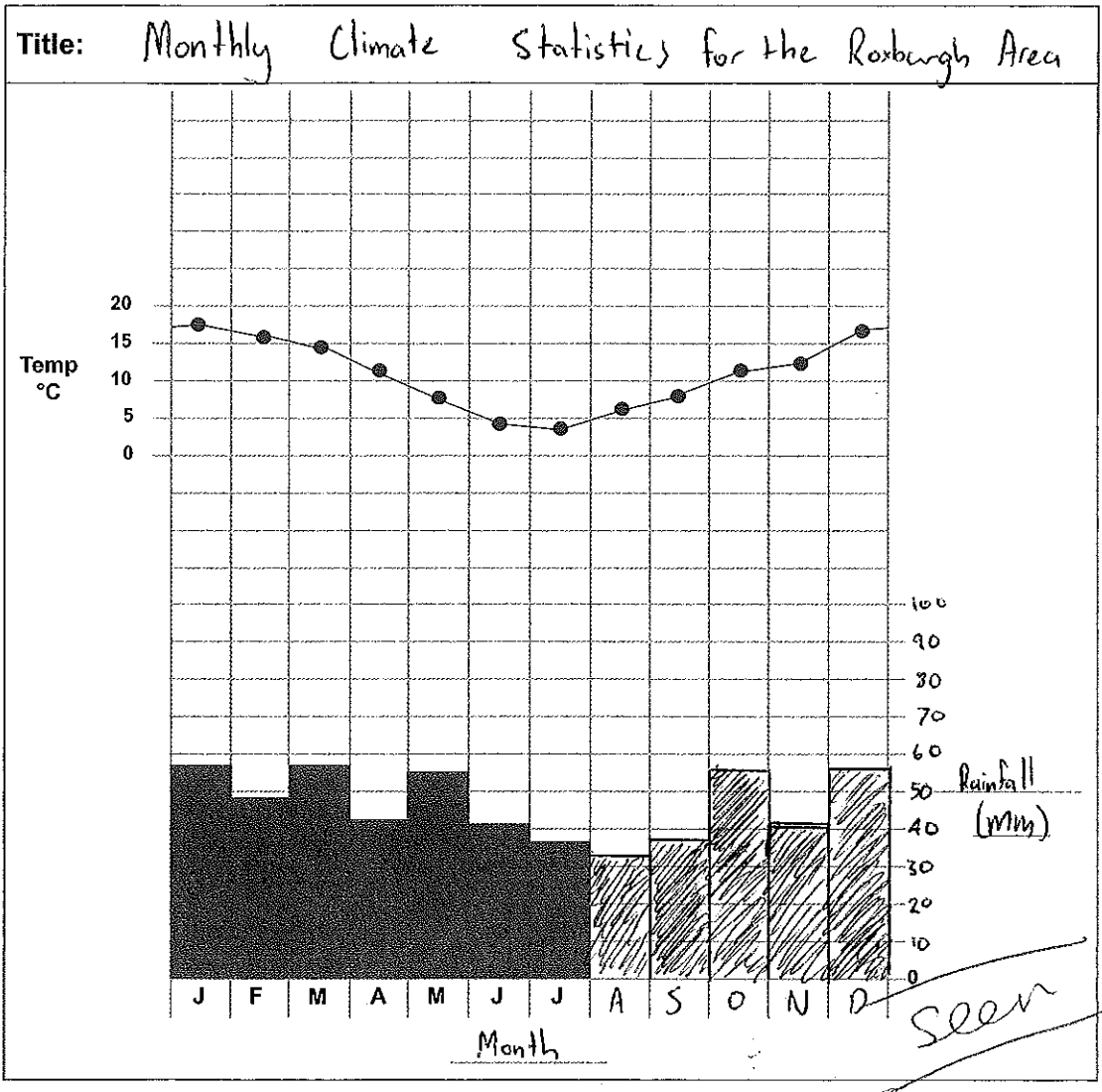
Part (c) continues on the next page

~~remove~~ trees that aren't needed. Another way
kaitiakitanga ~~can be~~ ~~applied~~ and sustainability can
be applied to Roxburgh is the Clutha
Gold Trail, where the environment of the area
is preserved and cared for. The trail goes
past many historical features of the location
and runs along the Clutha River. ~~and~~
This gives mutual benefits to the land
and the people because the land is
taken care of and the people have a
trail for entertainment. //

SPARE GRID

If you need to redo the climate graph from Question Two (a), complete it on the grid below. Make sure it is clear which answer you want marked.

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High Excellence exemplar for Geography 91010 2016		Total score	24
Q	Grade score	Annotation	
1	E8	The candidate completes most skills accurately and paragraph answers give full explanations, citing evidence from the resources.	
2	E8	<p>The candidate accurately completes the climate graph and it is fully labelled. Statistics are calculated accurately and given the correct units of measurement.</p> <p>The paragraph answer for Question Two (d) fully explains the seasonal pattern of temperatures and rainfall, giving detailed specific information from Resource G.</p>	
3	E8	<p>The candidate accurately places the three features on the précis sketch and they are drawn to scale, using the key.</p> <p>Land use types are listed in the correct order. A detailed explanation for the different land use types is given, with references to sustainable practices from the resources.</p>	