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91240



912400



NEW ZEALAND QUALIFICATIONS AUTHORITY
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SUPERVISOR'S USE ONLY

Level 2 Geography, 2018

91240 Demonstrate geographic understanding of a large natural environment

2.00 p.m. Thursday 15 November 2018
Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate geographic understanding of a large natural environment.	Demonstrate in-depth geographic understanding of a large natural environment.	Demonstrate comprehensive geographic understanding of a large natural 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 parts of the question in 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.

Merit

TOTAL

6

ASSESSOR'S USE ONLY

INSTRUCTIONS

A **large natural environment** means a distinctive part of the Earth's surface defined by its common natural characteristics (e.g. mountain, desert, forest, river valley) that occurs at a national, regional, or continental scale. The environment can be in New Zealand or overseas.

Natural characteristics (elements) of an environment include landforms (relief), climate, soils, and vegetation.

Name the **large natural environment** you have studied this year:

Tongariro Volcanic Environment

Refer to this environment when answering parts (a) and (b) of the question.

In your answer, you need to integrate case study evidence as well as geographic terminology and concepts.

Geographic concepts you may choose to use in your answer include:

Environments

May be natural and / or cultural. They have particular characteristics and features which can be the result of natural and / or cultural processes.

Location

Where something is found. Location can be an advantage or a constraint. Location can be described in absolute or relative terms.

Perspectives

Ways of seeing the world that help explain differences in decisions about, responses to, and interactions with environments. Perspectives are bodies of thought, theories, or world views that shape people's values and have built up over time.

Change

Involves any alteration to the natural or cultural environment. Change can be spatial and / or temporal. Change is a normal process in both natural and cultural environments. It occurs at varying rates, at different times, and in different places.

Interaction

Involves elements of an environment affecting each other and being linked together. Interaction incorporates movement, flows, connections, links and, interrelationships which work together and may be one- or two-way interactions. Landscapes are the visible outcome of interactions. Interaction can bring about environmental change.

QUESTIONASSESSOR'S
USE ONLY**(a) Characteristics of the environment**

Fully explain how the characteristics of your chosen large natural environment have formed and changed over time.

Natural characteristics (elements) of an environment include landforms (relief), climate, soils, and vegetation.

You may include maps and/or diagrams to support your explanation. (Space is provided on page 7.)

PLANNING (OPTIONAL)

was formed
and is located at 39°S
of the equator and 175°E
of the prime meridian.

Tongariro where Mt Ngauruhoe currently stands. During the ice age, Proto-Ngauruhoe was eroded to a stump, and ~~the~~ Mt Ngauruhoe formed from one of Mt Tongariro's 9 vents. //

Stage 3: 10000 years before present - present time, the warmer era. During this time, the glaciers and ice in the TVE began to melt as a result of the warmer temperatures. Orographic rainfall also occurs on the Western side of the TVE. Warm temperatures cause water vapour to rise off of the Tasman Sea. This water vapour is carried by the prevailing Westerly wind ~~to the~~ towards the TVE. ~~As~~ As the water vapour reaches the TVE, it is forced to rise by the relief. The adiabatic lapse rate causes cooling of the vapour, as the temperature drops 4°C for every 1000m gained vertically. This causes precipitation and rainfall on the Western slopes of Mt Ruapehu. There is a rainshadow caused by this ~~across~~ across the eastern plains of the TVE. This means that there is more rainfall on the ~~the~~ Western slopes of Mt Ruapehu ~~than~~ (2838mm/yr) than on the Eastern plains (1050mm/yr). As well as causing orographic rainfall, the prevailing Westerly winds in the TVE blow ash and debris from volcanic activity over the Eastern Plains. This limits the growth of vegetation as the soil is dry and lacking nutrients. In 180AD, the Taupo eruption occurred, ~~sending~~ ^{spreading rock and} ash everywhere in an 80km radius, incinerating all vegetation. The South Western slopes of Ruapehu were protected by the relief, however ~~the~~ vegetation and soils in other areas were destroyed.

Extra space if required.

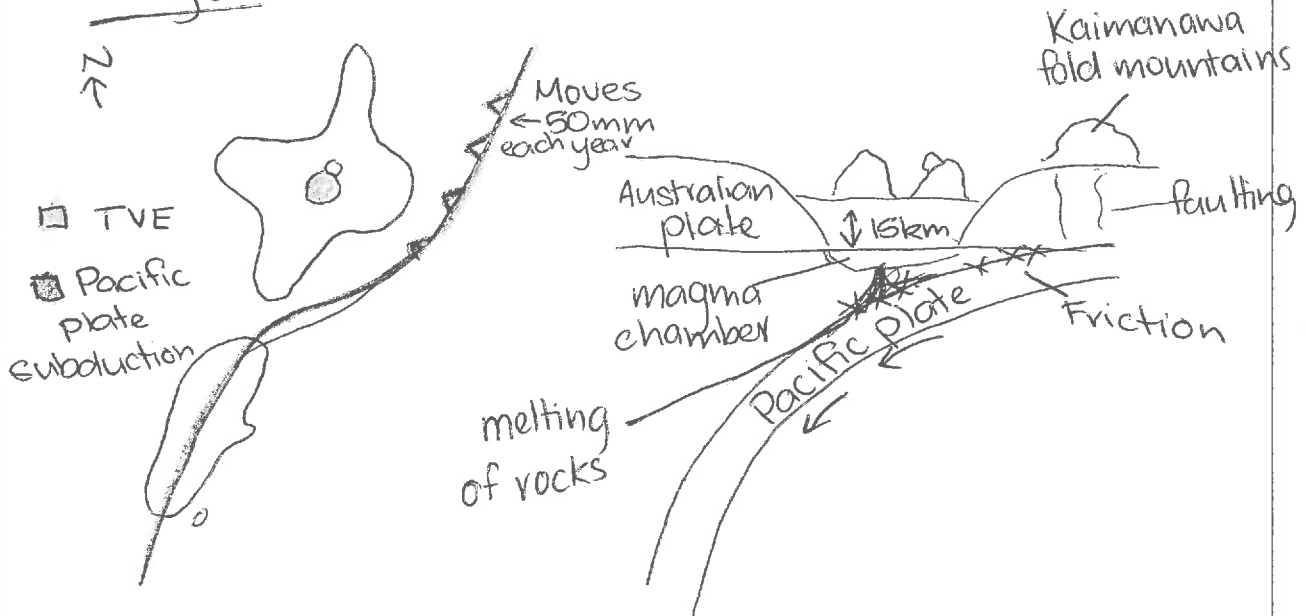
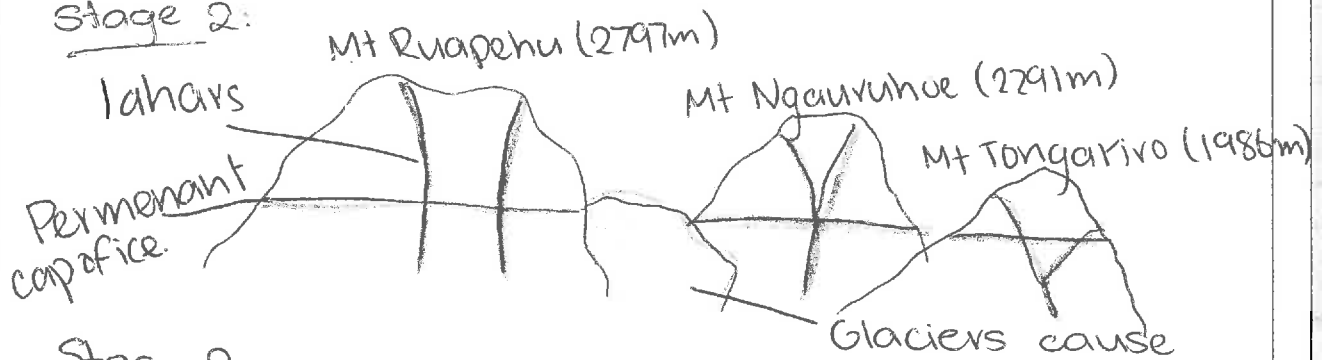
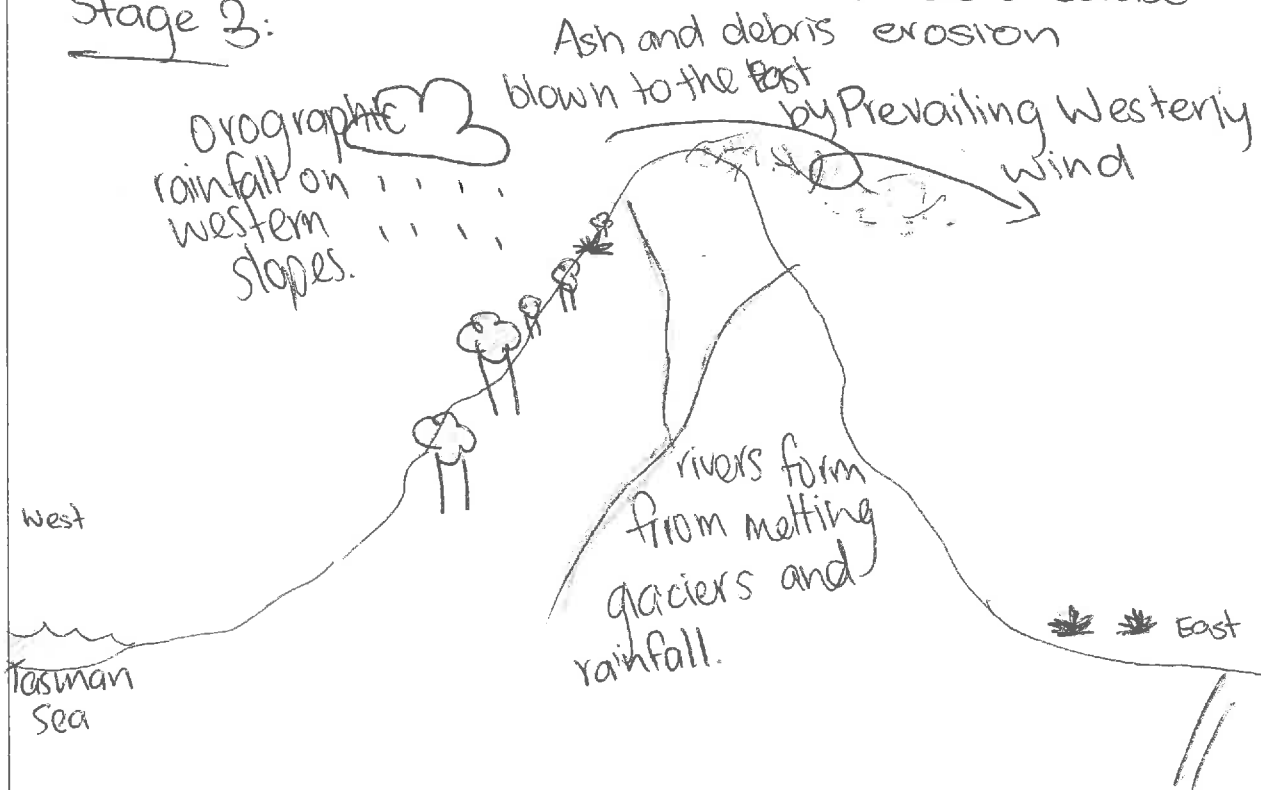
Write the question number(s) if applicable.

QUESTION
NUMBER

- a. Other areas on the Western side of Mt Ruapehu ~~are~~ have developed ^{strong, healthy} vegetation ~~ever~~ since the eruption due to the ideal temperatures and rainfall conditions, while other areas have not. The Eastern Plains are very dry, as a result of the rainshadow caused by the orographic ~~rainfall~~, as well as continuously being showered with ash and other volcanic debris, ~~destroying~~ slowing the nutrient cycle. These conditions, as ~~well as wind funnelling thr~~ strong winds as a result of wind funnelling through the Tama Saddle, mean that vegetation has been unable to thrive and progress on the Eastern Plains since the Taupo eruption. The vegetation at higher altitudes on ~~the~~ the mountains has also not been able to grow and thrive. Due to the adiabatic lapse rate, the temperatures are lower at higher altitudes, making it difficult for plants to develop and grow. Fluvial erosion also changes the environment. As the glaciers from the ice age melt, rivers flow down the mountains carving out v-shaped valleys. Orographic rainfall also contributes to the formation of these rivers. The rivers carry rocks and sediments ^{and deposit them further} down the mountain. This alters the relief in the TVE.

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MAPS/DIAGRAMS (OPTIONAL)

ASSESSOR'S
USE ONLYStage 1:Stage 2:Stage 3:

(b) Perception and use of the environment

Different groups of people or individuals have different perceptions of the natural environment. Perceptions can change over time and include cultural, economic and political. People's perceptions affect their use of the environment.

Perceptions are outcomes of people's background, experiences, or involvement with the natural environment.

Name ONE group or individual whose perception of your chosen large natural environment has changed over time.

The New Zealand government.

Fully explain how the perception of the large natural environment by this group or individual has changed over time, and how this has affected their use of the large natural environment.

PLANNING (OPTIONAL)

~~The New when New~~ Zealand When European settlers first arrived in New Zealand, forming the New Zealand government, they had an economic perspective of the TVE. They found that the TVE contained resources which could be used to trade and make a profit. As a result of this, various farming and forestry activities took place in the TVE. This meant that many ~~aspects of the environment~~ ^(such as vegetation) natural features of the environment were damaged or destroyed. The government of European settlers perceived the environment ~~as a~~ to be a resource, which they could use for personal gain. By carrying out forestry and logging, the vegetation and soils in the environment were altered, ~~and~~ ^{changing} ~~causing damage to~~ the environment. Many of the activities that were harmful to the environment were not carried out by the government itself, but were endorsed by the government.

The Tuwharetoa iwi, who are the ~~ing~~ indigenous Maori people from the TVE, decided to gift the ^{of Mt Tongariro, Mt Maungnue and Mt Ruapehu} three peaks to the New Zealand government in order to protect them. Following this, the government formed the 'Tongariro National Park' which ^{encompassed} ~~covered~~ the TVE. This meant that the land within the National park could not be used for farming or forestry purposes. The Department of Conservation ~~is~~ is the government agency that takes care of the environment, and ensures that it is protected. ~~At~~ At present, the ~~the~~ Department of Conservation have

control over ^{any} ~~the~~ infrastructure built in the National Park and its uses. The TVE is a widely known attraction for tourists, and still supports the New Zealand economy ^{in this way}. ~~There are various~~ The TVE is still used by the government, however their perception has changed to a ~~positive~~ ~~perspective~~ sustainable perspective. Although the environment is used by skiers and trampers the department of conservation must approve of roading, buildings, and ^{other} infrastructure ^{built} in the environment. An example of this is the ski huts ~~found~~ on Mt Ruapehu. These are all required to be painted in dark grey and brown colours in order to maintain the ~~the~~ integrity and natural features of the TVE.

The ~~TVE has~~ government perception of the TVE has changed over ~~its~~ time from an economic perspective to a sustainable perspective. Although the land ~~is~~ was and is still used by the government, it ~~is~~ is now used ~~as~~ and cared for in a ~~much~~ more sustainable manner for ~~future generations to also enjoy and use~~ with the preservation of the environment for future generations in mind.

Merit Exemplar 2018

Subject	Geography	Standard	91240	Total score	6
Q	Grade score	Annotation			
	M6	<p>This paper focusses on the Tongariro Volcanic Centre. Part A covers three time periods to show not only how the area was formed but how some of the characteristics have changed over time.</p> <p>Part B discusses how the New Zealand Governments perception of the area has changed over time. Both sections are covered in detail as is the case study material.</p>			