1.10 Tectonic Hazards: Test Pack

AQA 8035 · Calculator allowed · about 20 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 For each statement below, state whether it is TRUE or FALSE.

(a) At a constructive plate boundary, two plates move apart from each other. **(1)**

(b) At a destructive plate boundary, two plates move apart from each other. **(1)**

(c) At a conservative plate boundary, two plates slide past each other. **(1)**

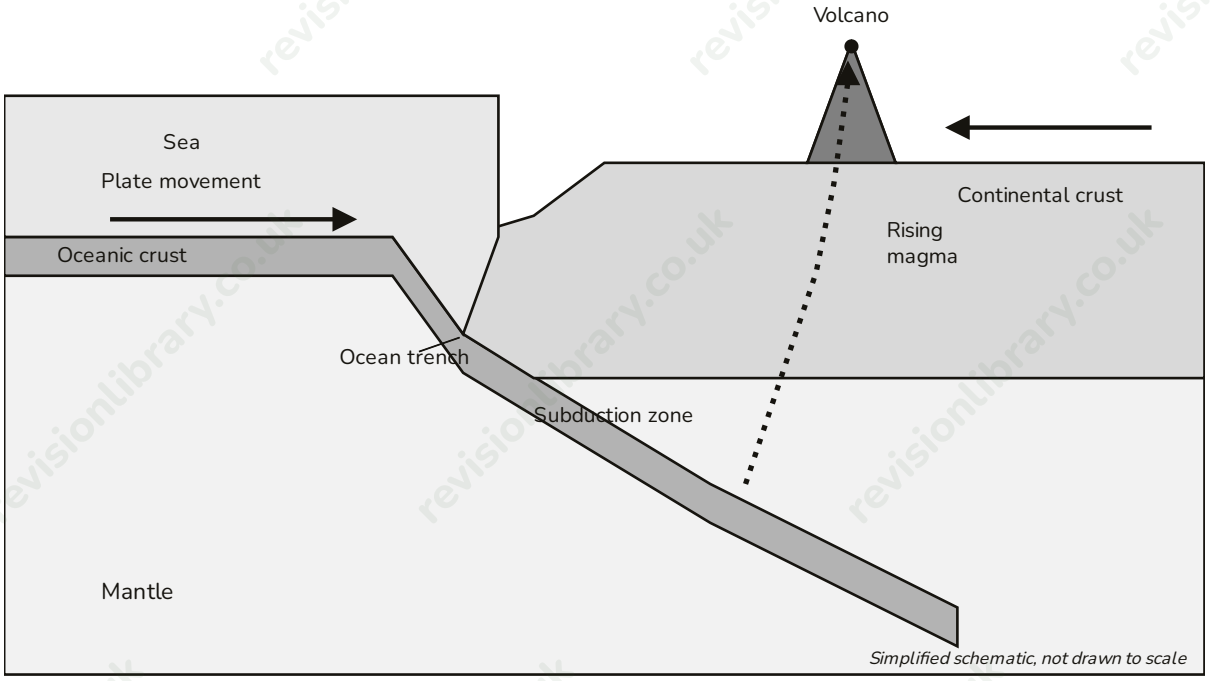
(d) Volcanoes are commonly found at conservative plate boundaries. **(1)**

(Total for Question 1 is 4 marks)

© Revision Library | revisionlibrary.co.uk

2 Figure 1 shows a cross-section through a destructive plate boundary, where an oceanic plate and a continental plate are colliding.

Figure 1: cross-section through a destructive plate boundary



(a) Name the process by which the oceanic plate sinks beneath the continental plate at this boundary. **(1)**

(b) Using Figure 1, describe what happens to the oceanic plate as it moves towards the trench and beyond. **(2)**

(c) Using Figure 1, explain why a volcano forms above the subduction zone. **(3)**

(Total for Question 2 is 6 marks)

© Revision Library | revisionlibrary.co.uk

3 Explain one reason why people continue to live in areas at risk from tectonic hazards, despite the danger.

(Total for Question 3 is 3 marks)

4 The scales used to measure earthquake magnitude are logarithmic. This means that each whole number increase in magnitude represents about 10 times more ground shaking. An earthquake has a magnitude of 5. A second earthquake causes about 100 times more ground shaking than this one.

(a) Calculate the magnitude of the second earthquake. **(2)**

(Total for Question 4 is 2 marks)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 1.10 Tectonic Hazards: Test Pack

Question 1

(a) True **B1**

(a) Answer: True

(b) False **B1**

(b) Answer: False

(c) True **B1**

(c) Answer: True

(d) False **B1**

(d) Answer: False

Question 2

(a) subduction **B1**

(a) Answer: Subduction.

(b) it is forced/subducted down beneath the (less dense) continental plate, oe **B1**

(b) it sinks into the hot mantle and melts, oe **B1**

(b) Answer: It is forced down beneath the continental plate because it is denser, and it melts as it sinks into the mantle.

(c) the subducted oceanic plate melts in the mantle, forming magma, oe **B1**

(c) the magma is less dense than the surrounding rock, so it rises, oe **B1**

(c) it rises through the continental crust and erupts at the surface, forming a volcano, oe **B1**

(c) Answer: Magma forms as the subducted plate melts; being less dense than the surrounding rock, it rises through the continental crust and erupts to form a volcano.

Question 3

identifies a reason, e.g. volcanic soil is very fertile for farming, oe **B1**

links this to why people stay, e.g. many people rely on the land for their livelihood/income, oe **B1**

recognises the risk is accepted, e.g. a major eruption or earthquake may not seem imminent, so people weigh the benefits against a risk that feels low or distant, oe **B1**

Answer: For example, the volcanic soil around many volcanoes is very fertile, so people farm there for their livelihoods and accept the risk because a major eruption may not seem imminent.

Question 4

(a) recognises that 100 times more shaking = 2 whole-number steps up the scale, since 10 x 10 = 100, oe **M1**

(a) magnitude 7 cao **A1**

(a) Answer: Magnitude 7.

© Revision Library | revisionlibrary.co.uk