



Oxford Cambridge and RSA

Friday 20 November 2020 – Afternoon

**GCSE (9–1) Geography B
(Geography for Enquiring Minds)**

J384/03 Geographical Exploration

Time allowed: 1 hour 30 minutes



You must have:

- the Resource Booklet (inside this document)

You can use:

- a ruler (cm/mm)
- a scientific or graphical calculator



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s)

Last name

INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.

INFORMATION

- The total mark for this paper is **60**.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- Spelling, punctuation and grammar (SPaG) and the use of specialist terminology will be assessed in questions marked with a pencil (✎).
- This document has **12** pages.

ADVICE

- Read each question carefully before you start your answer.

Answer **all** the questions.

Indonesia is a country in South East Asia made up of many islands. Sulawesi, one of the Indonesian islands, was hit by an earthquake measuring 7.5 on the Richter Scale on 28th September 2018.

- 1 (a) Study **Fig. 1** in the separate Resource Booklet, a map of Indonesia showing the earthquake on 28th September 2018.

- (i) Describe the location of the epicentre of the earthquake.

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..... [2]

- (ii) State the intensity of shaking from the earthquake felt in the city of Poso.

..... [1]

- (iii) Using your own understanding, explain how an earthquake is caused.

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..... [3]

- (b) Following the earthquake in Indonesia, a tsunami occurred.

Study **Fig. 2** in the separate Resource Booklet, a tsunami impact map for Northern Sulawesi, Indonesia.

- (i) Calculate the distance from the epicentre to the city of Palu.

..... km [1]

- (ii) The tsunami reached the city of Palu 6 minutes after the earthquake occurred.

Using the equation $\text{speed} = \text{distance} / \text{time}$, calculate the speed of the wave in km per minute. Show your working.

..... km per minute [2]

- (c) Study **Fig. 3** in the separate Resource Booklet, an infographic showing the impacts of and responses to the tsunami in Sulawesi.
- (i) Calculate the total population of the regions of Sulawesi labelled on **Fig. 3** as 'severely affected' by the earthquake and tsunami. Show your working.

..... [2]

- (ii) Using evidence from **Fig. 3**, explain **two** ways in which people were affected by the earthquake and tsunami in Sulawesi.

1

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2

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[4]

..... [12]

- 2 (a) Study **Fig. 4** in the separate Resource Booklet, a map of Sulawesi, Indonesia showing the location of and threat to coral reefs.

(i) Estimate the percentage of coral reef in Sulawesi that is classified as High Threat.

..... % [1]

(ii) Using your own understanding, describe **one** feature of the flora and fauna of a coral reef ecosystem.

Flora:

.....

Fauna:

.....

[2]

- (b) Study **Fig. 5** in the separate Resource Booklet, a factfile about uses of coral reefs in Sulawesi, Indonesia.

Using **Figs. 2, 4 and 5**, analyse the physical and human threats to coral reef ecosystems in Sulawesi.

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..... [6]

- 3 (a) Study **Fig. 6** in the separate Resource Booklet, key statistics tables for the Sulawesi rainforest and the economy of Indonesia.
- (i) Using the information in **Fig. 6 Table A**, calculate the number of km² of tree coverage lost from 2010–2018.

..... km² [2]

- (ii) Using the information in **Fig. 6 Table B**, how can you tell that ecotourism is **not** a large industry in Indonesia?

..... [1]

- (b) Study **Fig. 7** in the separate Resource Booklet, tropical rainforest cover in Sulawesi, Indonesia.

Using **Figs. 6 and 7**, discuss the economic importance of the rainforest to Indonesia.

..... [6]

4* Using the information in the separate Resource Booklet and your own understanding:

1. Assess the environmental value of Sulawesi, Indonesia.
2. Suggest **one** sustainable development strategy for use in Sulawesi to tackle **either** the threat of tectonic hazards **or** destruction of their ecosystems.

..... [12]

Spelling, punctuation and grammar and the use of specialist terminology (✎) [3]

END OF QUESTION PAPER

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