

**GEOGRAPHY**

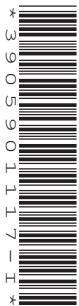
**9696/32**

Paper 3 Advanced Physical Geography Options

**October/November 2018**

**INSERT**

**1 hour 30 minutes**



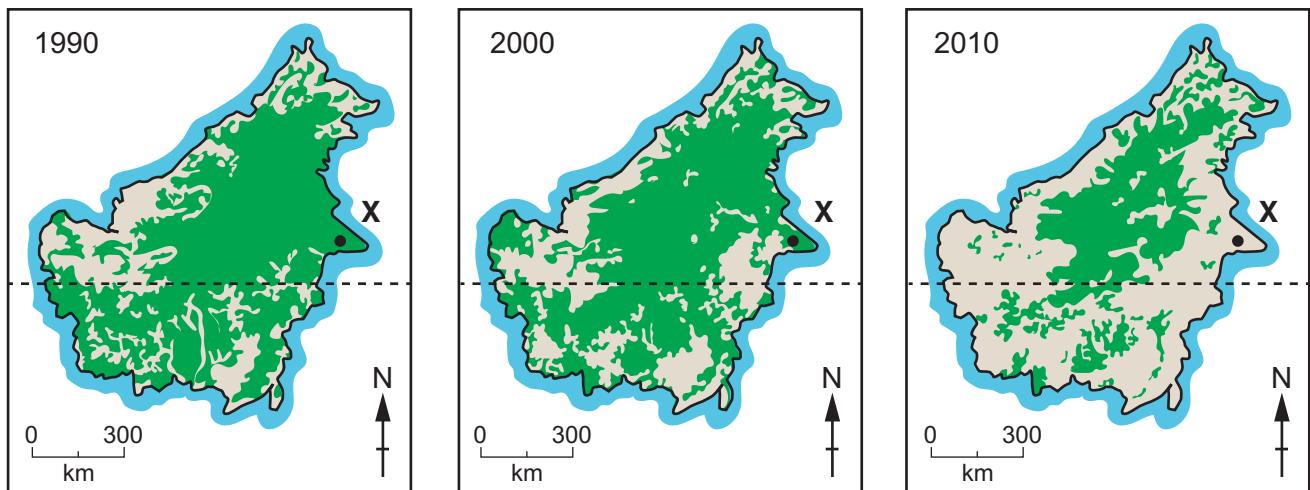
**READ THESE INSTRUCTIONS FIRST**

This Insert contains all the resources referred to in the questions.

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This document consists of **6** printed pages and **2** blank pages.

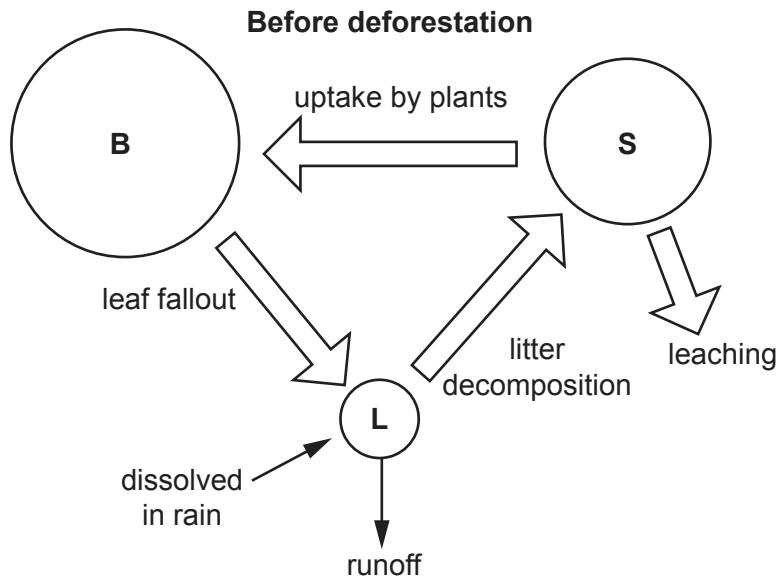
Fig. 1.1 for Question 1

**Areas of tropical rainforest in Borneo in 1990, 2000 and 2010****Key**

- [Green square] tropical rainforest
- [Light beige square] deforested area
- [Dashed line] equator

Fig. 1.2 for Question 1

Nutrient cycling for location X in Fig. 1.1 before and after deforestation

**After deforestation**

```

graph TD
    B((B)) -- "uptake by plants" --> S((S))
    S -- "leaf fallout" --> L((L))
    S -- "litter decomposition" --> L
    S -- "runoff" --> runoff[runoff]
    L -- "dissolved in rain" --> runoff
    L -- "runoff" --> runoff
  
```

The diagram illustrates the nutrient cycle after deforestation. It features three main components: Biomass (B), Soil (S), and Litter (L). Biomass (B) has an arrow pointing to Soil (S) labeled "uptake by plants". Soil (S) has an arrow pointing to Litter (L) labeled "leaf fallout". Soil (S) also has an arrow pointing to Litter (L) labeled "litter decomposition". Soil (S) has an arrow pointing downwards labeled "runoff". Litter (L) has an arrow pointing to the left labeled "dissolved in rain", which then points to "runoff". Litter (L) also has an arrow pointing downwards labeled "runoff".

**Key**

**B** – biomass

**S** – soil

**L** – litter

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[Turn over

**Fig. 4.1 for Question 4**

**A cliffed coastline**

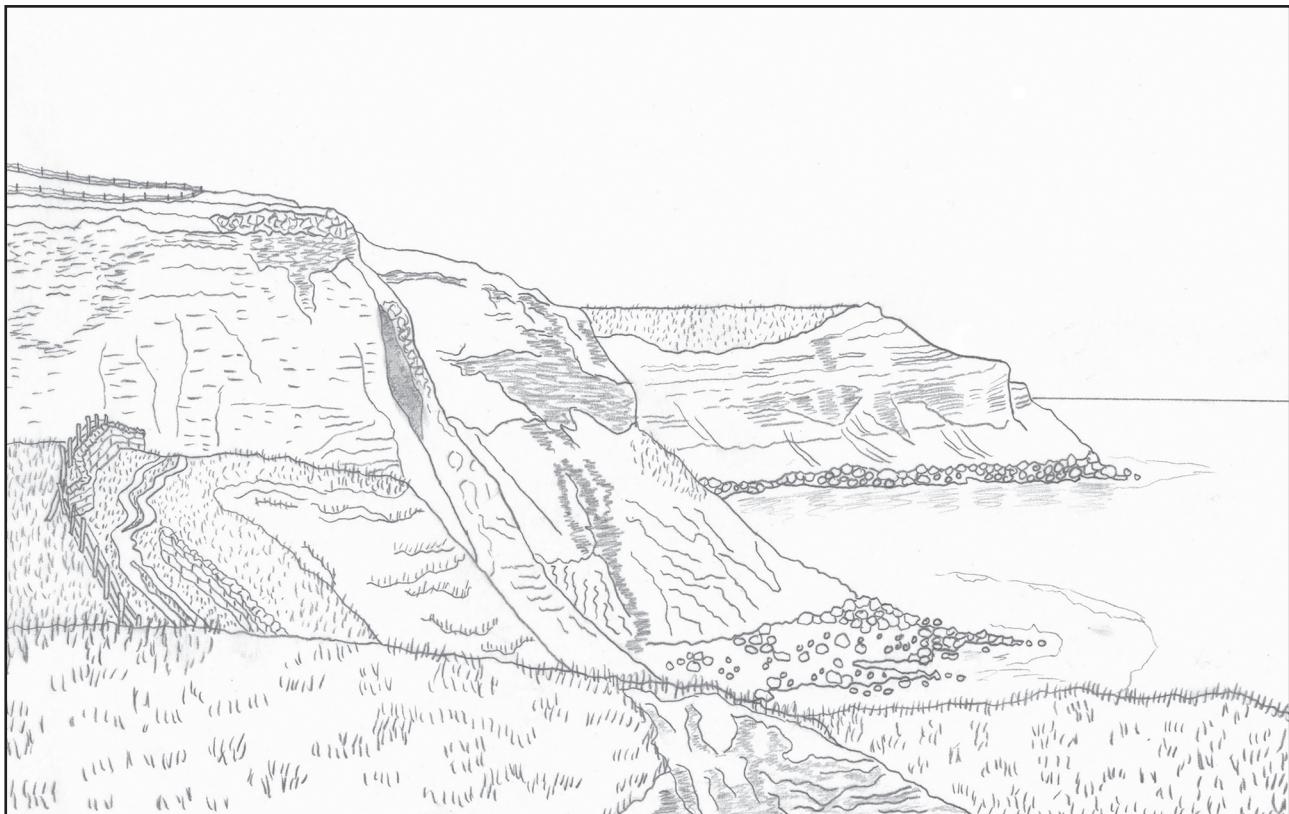


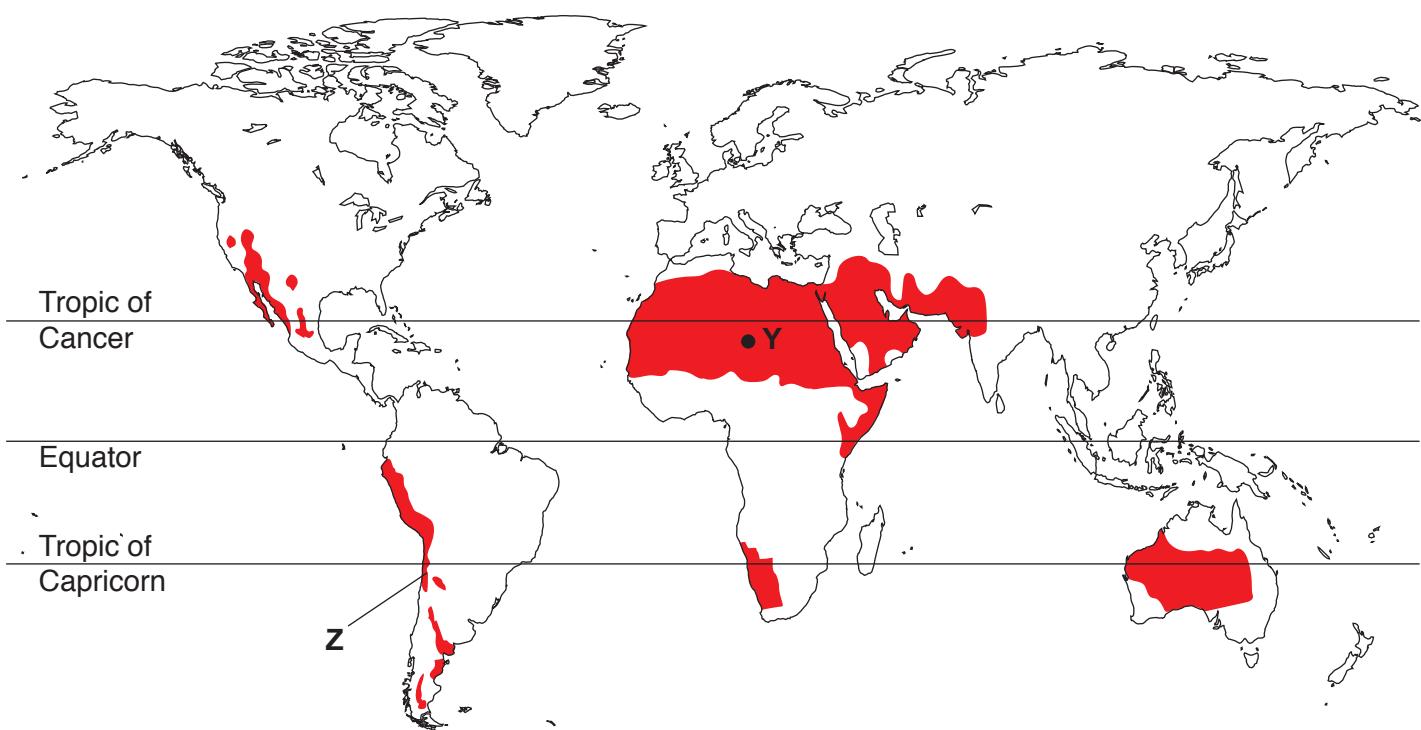
Fig. 7.1 for Question 7

A mass movement



Fig. 10.1 for Question 10

## Global distribution of hot arid areas



## Key

hot arid area

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