



CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
NUMBER

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0460/23

May/June 2021

1 hour 30 minutes

You must answer on the question paper.

You will need:

Insert (enclosed)	Plain paper
1:25 000 survey map (enclosed)	Protractor
Calculator	Ruler

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- If additional space is needed, you should use the lined pages at the end of this booklet; the question number or numbers must be clearly shown.

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [].
- The insert contains additional resources referred to in the questions.

This document has **20** pages. Any blank pages are indicated.

1 Study the map extract for Thiezac, France. The scale is 1:25 000.

(a) Fig. 1.1 shows some of the features around the settlement of le Croizet in the south of the map extract. Study Fig. 1.1 and the map extract, and answer the questions below.

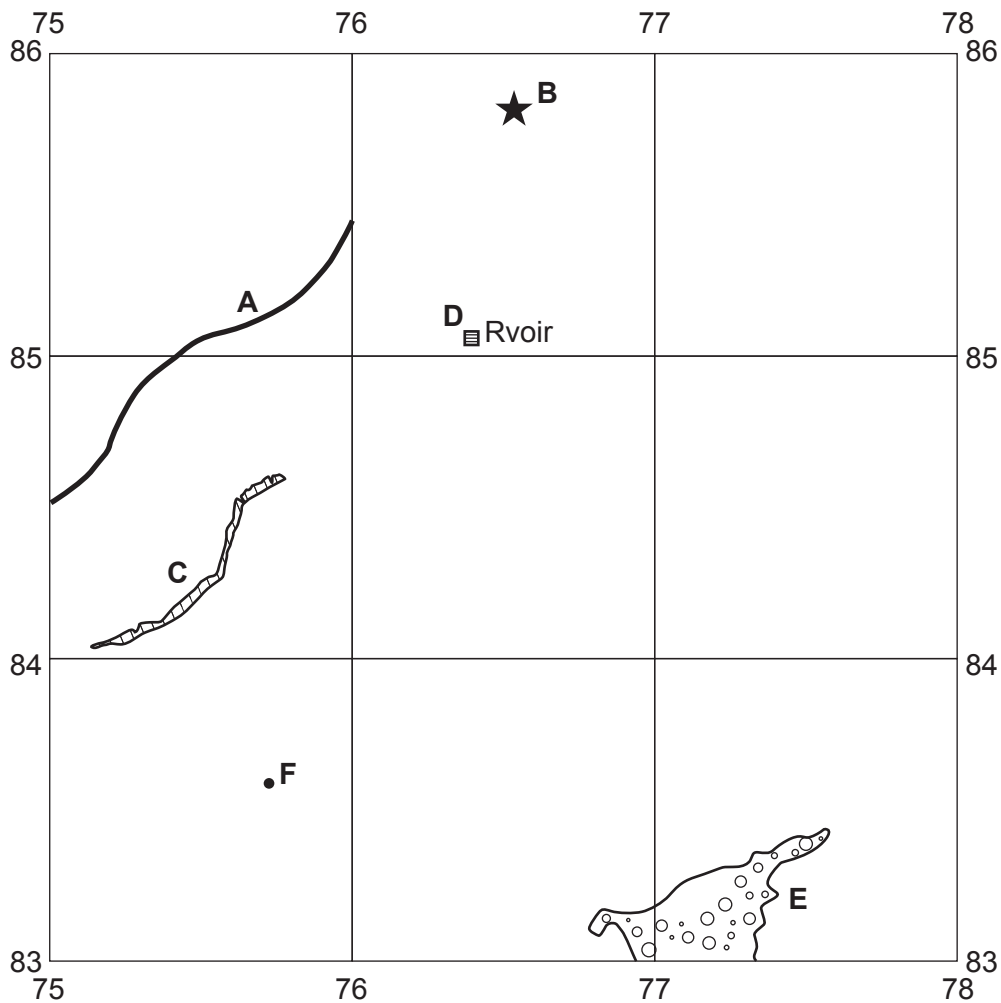


Fig. 1.1

Using the map extract, identify the following features shown in Fig. 1.1:

(i) feature A

..... [1]

(ii) feature B

..... [1]

(iii) feature C

..... [1]

(iv) feature D

..... [1]

(v) land use at **E**

..... [1]

(vi) the height above sea level of the spot height at **F**.

..... metres [1]

(b) Fig. 1.2 is a cross-section along northing 85 from 720850 to 750850.

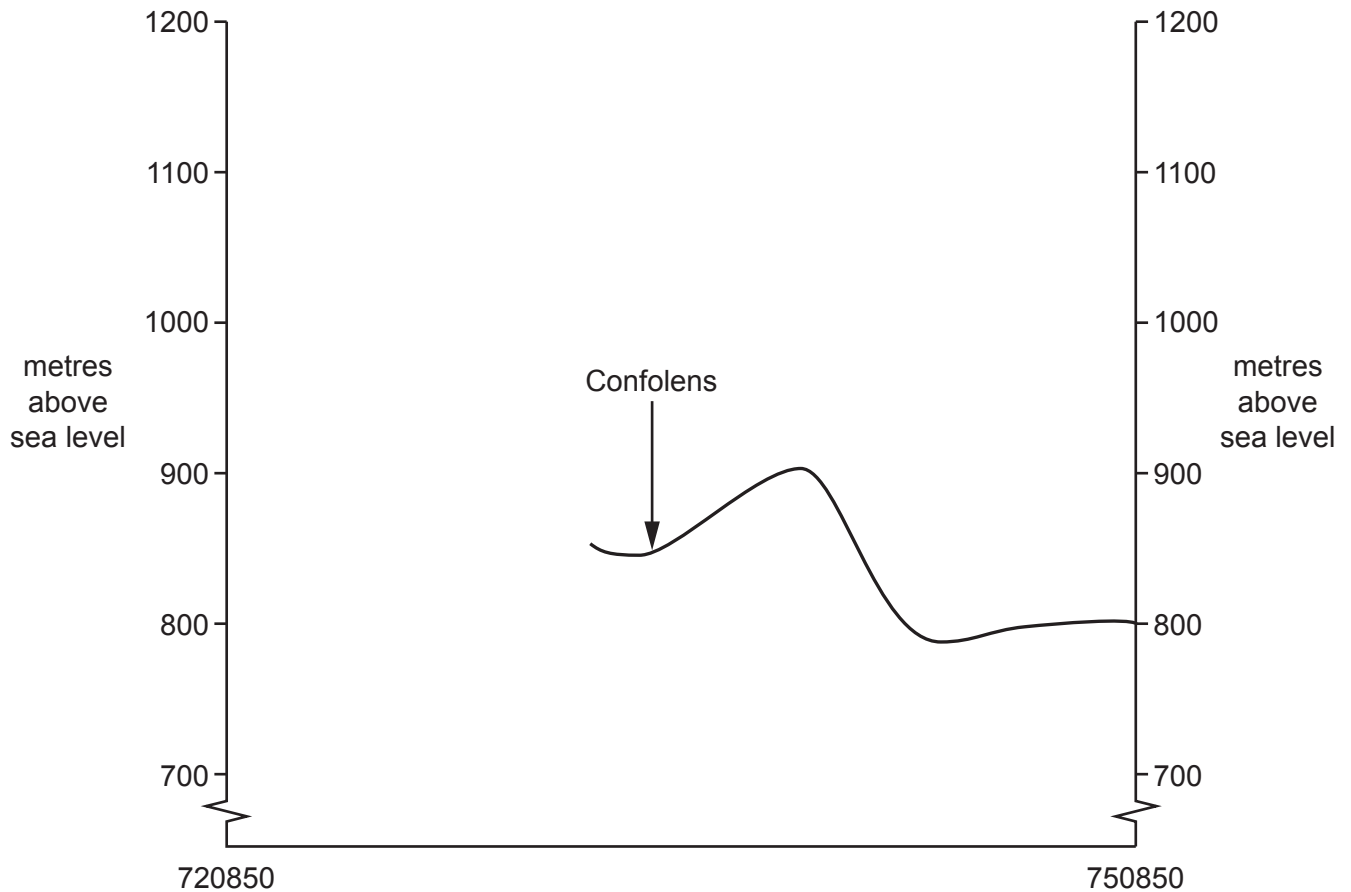


Fig. 1.2

(i) On Fig. 1.2, **use a labelled arrow** to show the position of the N122 road. [1]

(ii) The cross-section shown on Fig. 1.2 is incomplete. Using information from the map extract, draw a line on Fig. 1.2 to **complete the cross-section**. [2]

(c) Fig. 1.3 shows an area in the west of the map extract.

A person walks on the footpath (shown by a red line) **from** Lagat (730856), north west of Thiezac, **to** Cascade de Faillitoux (722866), east of the river north-north east of Lasmolineries.

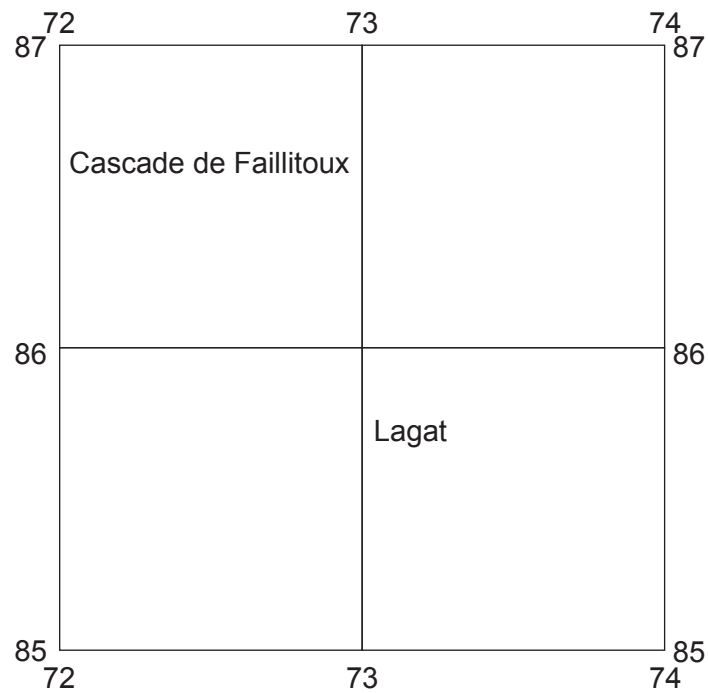


Fig. 1.3

(i) In which overall direction does the person travel? Tick (✓) **one** box below.

	tick (✓)
south east	
south west	
north west	
north east	

[1]

(ii) What is the distance travelled along the footpath **from** Lagat **to** Cascade de Faillitoux? Tick (✓) **one** box below.

	tick (✓)
1010 metres	
1600 metres	
2010 metres	
2300 metres	

[1]

- (iii) The table below shows the features in the area. Which **two** features will the person pass on the footpath? Complete the table by putting ticks (✓) in the correct two boxes.

	tick (✓)
steep slopes	
lake	
reservoir	
deciduous woodland	
coniferous woodland	

[2]

- (iv) Measure the bearing **from** the spot height of 1096 metres at Lagat (730856) **to** Cascade de Faillitoux (722866).

..... degrees

[1]

- (d) Fig. 1.4 shows the location of two grid squares in the west of the map extract. These are square 7085 at la Rochere and 7185 at Lasmolineries. Study the area and answer the questions on the next page.

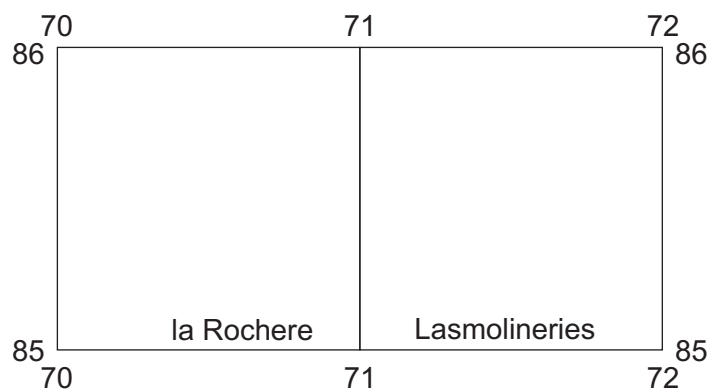


Fig. 1.4

Describe the relief and drainage of this area.

Relief

.....

.....

.....

.....

.....

.....

.....

.....

Drainage

.....

.....

.....

.....

.....

.....

.....

.....

..... [6]

[Total: 20]

TURN PAGE FOR QUESTION 2

- 2 Fig. 2.1 gives information about population change in four regions in Italy (an MEDC) in 2017. Study Fig. 2.1 and answer the following questions.

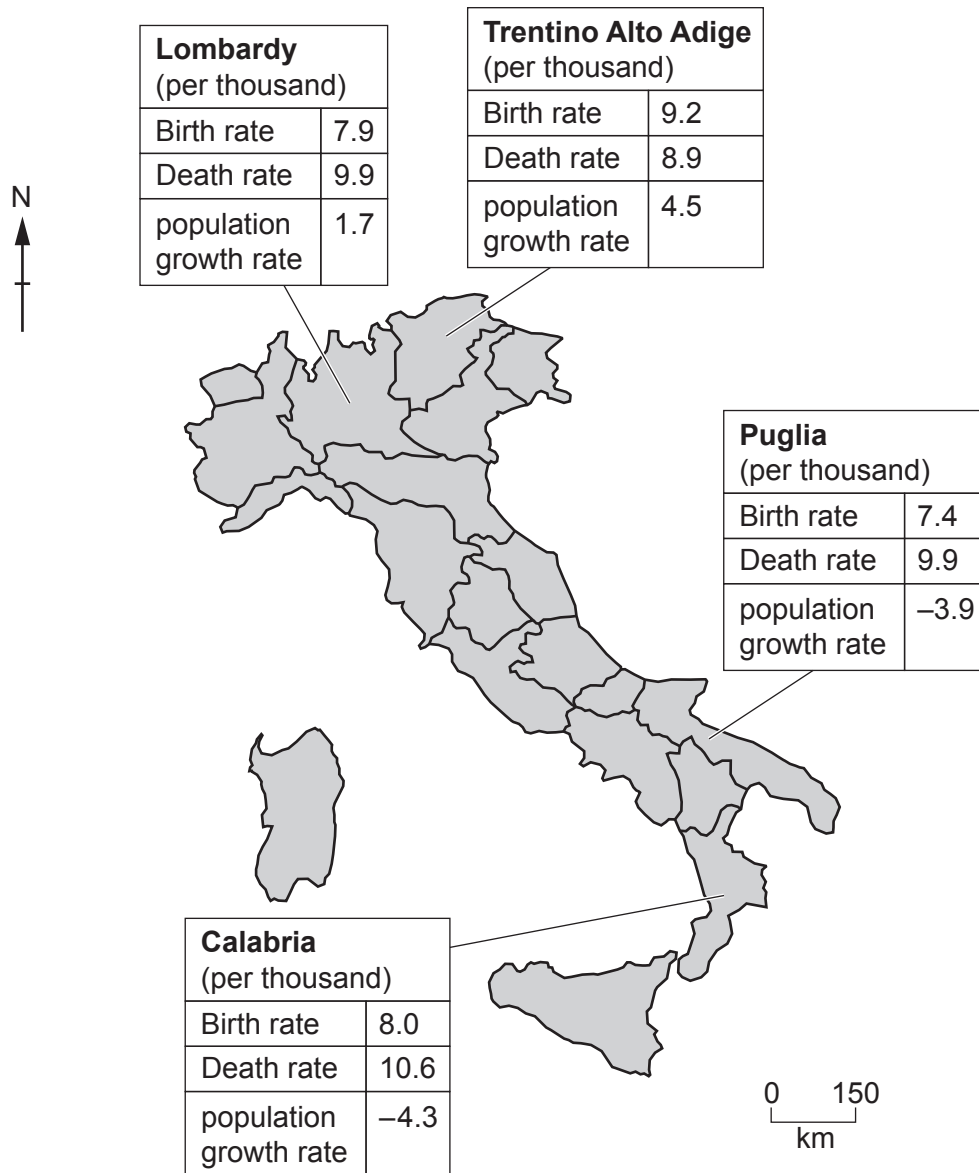


Fig. 2.1

(a) Which of the four regions had:

(i) the highest birth rate

..... [1]

(ii) the highest death rate

..... [1]

(iii) the largest population decline?

..... [1]

- (b) Compare the population growth in the northern and southern regions.

.....
 [1]

- (c) Study the following calculation for population growth:

Population growth rate = birth rate +/- death rate +/- migration

Calculate the migration rate for the following regions:

- (i) Trentino Alto Adige

..... per thousand [1]

- (ii) Calabria.

..... per thousand [1]

- (d) Suggest **two** pull factors attracting people to the northern regions of Italy (an MEDC).

1

 2
 [2]

[Total: 8]

3 Urbanisation causes many problems, including air pollution.

Fig. 3.1 shows the level of air pollution in New Delhi, India, in 2016 and 2017.

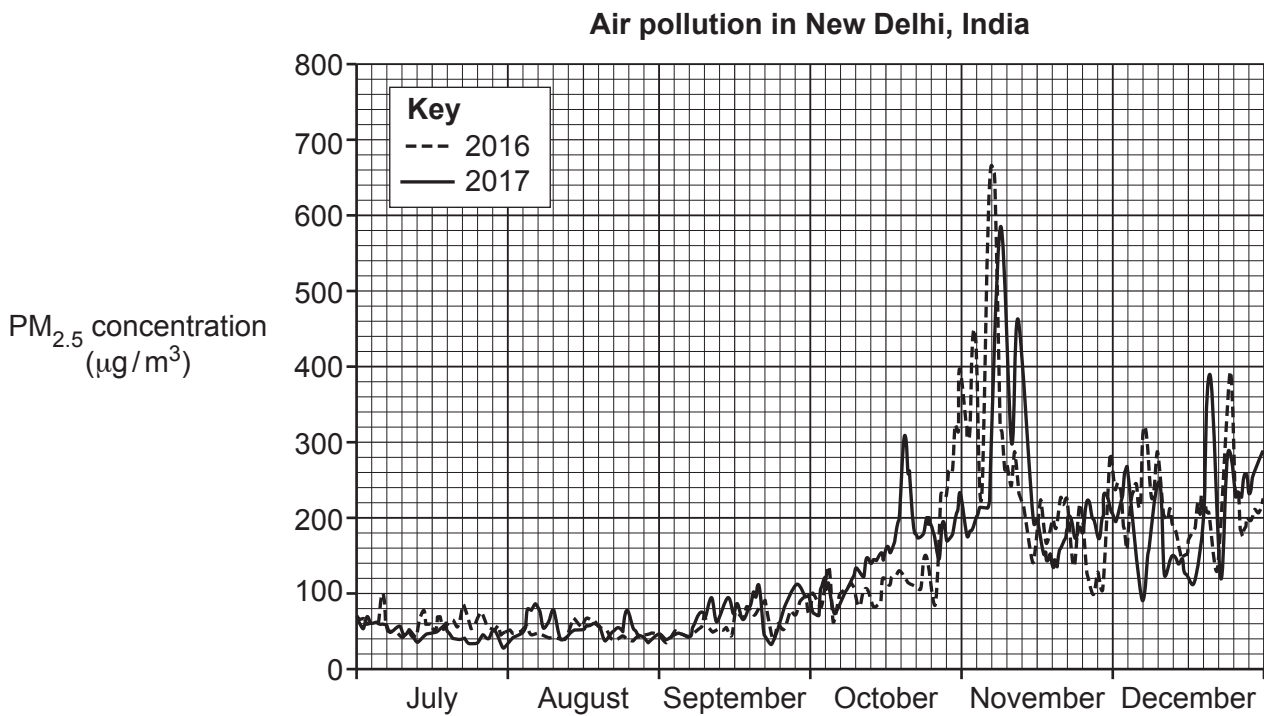


Fig. 3.1

(a) (i) Using Fig. 3.1, identify the lowest level of air pollution reached in November 2016.

..... µg/m³ [1]

(ii) Using Fig. 3.1, identify the month and year when the pollution levels are between 100 and 400 µg/m³.

month year [1]

(iii) Using Fig. 3.1, give **two** similarities and **one** difference between the overall trends in air pollution levels in 2016 and 2017. Do **not** use statistics in your answer.

Similarities

1

.....

2

.....

Difference

..... [3]

(b) Suggest **three** groups of people who are most likely to be badly affected by air pollution.

1

2

3 [3]

[Total: 8]

- 4 Fig. 4.1 (Insert) is a photograph showing a coastal deposition feature, a spit, at Spurn Head, England.

(a) (i) Describe the feature shown in Fig. 4.1.

.....

.....

.....

.....

.....

..... [4]

(ii) What process leads to the formation of spits? Circle the correct answer.

erosion longshore drift corrasion attrition [1]

(b) Fig. 4.2 shows coastal erosion of a spit on the east coast of the UK.

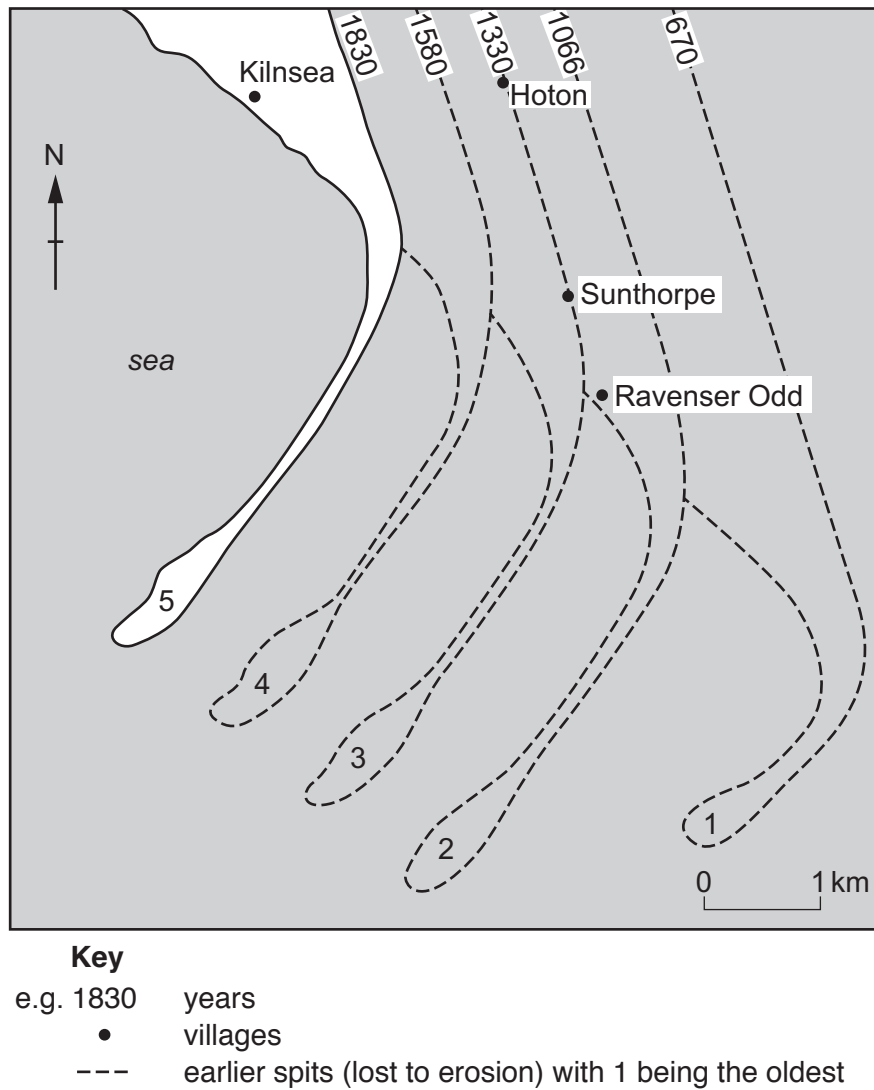


Fig. 4.2

(i) Using Fig. 4.2, describe how the spit has changed over time.

.....

.....

.....

.....

.....

..... [2]

(ii) Using Fig. 4.2, name a village destroyed by erosion before 1330.

..... [1]

[Total: 8]

- 5 (a) Isobars join points of equal air pressure on a weather map. Fig. 5.1 shows the air pressure on one morning across Australia.

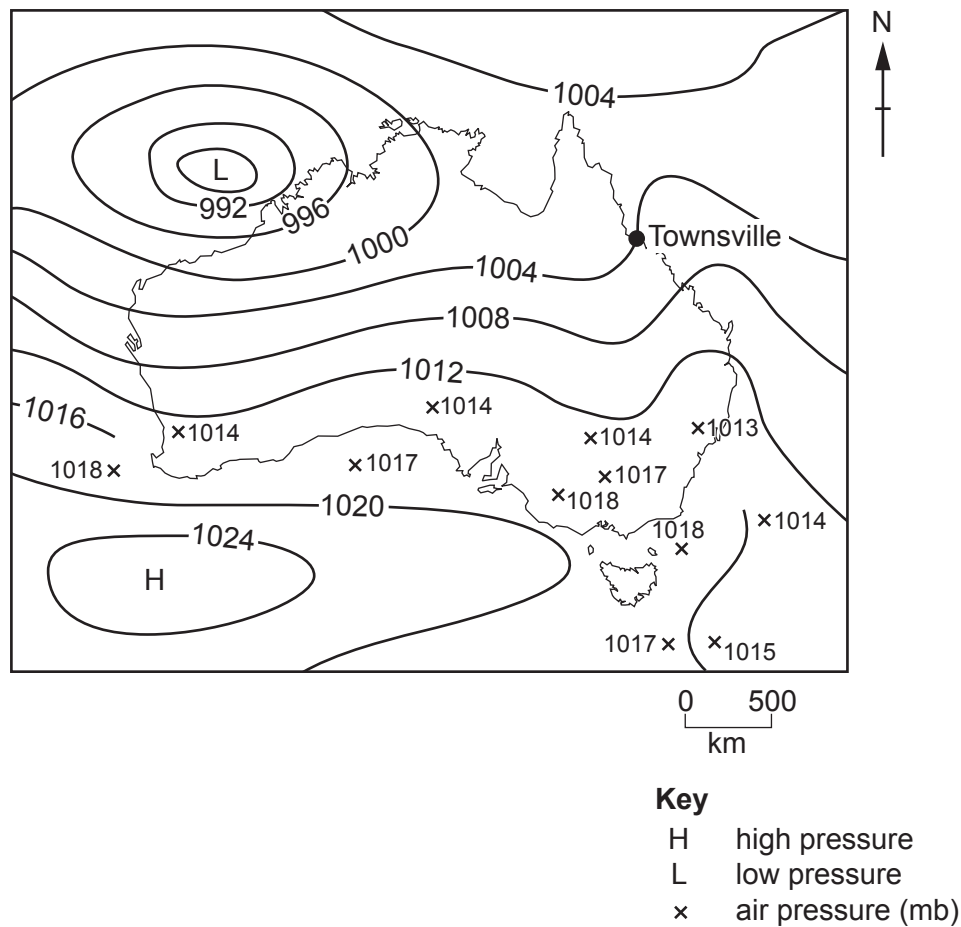


Fig. 5.1

- (i) What is the air pressure in Townsville shown in Fig. 5.1?
 mb [1]
- (ii) The units of pressure are abbreviated as mb. What does mb stand for?
 [1]
- (iii) What weather instrument is used to record air pressure?
 [1]
- (iv) On Fig. 5.1, **complete the isobar** for 1016mb. [1]

- (v) Describe how the pressure varies across the area shown in Fig. 5.1. Use statistics in your answer.

.....

.....

.....

.....

.....

..... [3]

- (b) Table 5.1 shows the air pressure for the rest of the day in Townsville.

Using Table 5.1, **plot the air pressure** for 09:00 and 11:00 on Fig. 5.2.

[1]

Table 5.1

	05:00	07:00	09:00	11:00	13:00	15:00	17:00
Air pressure (mb)	1004	1007	1008	1009	1008	1006	1005

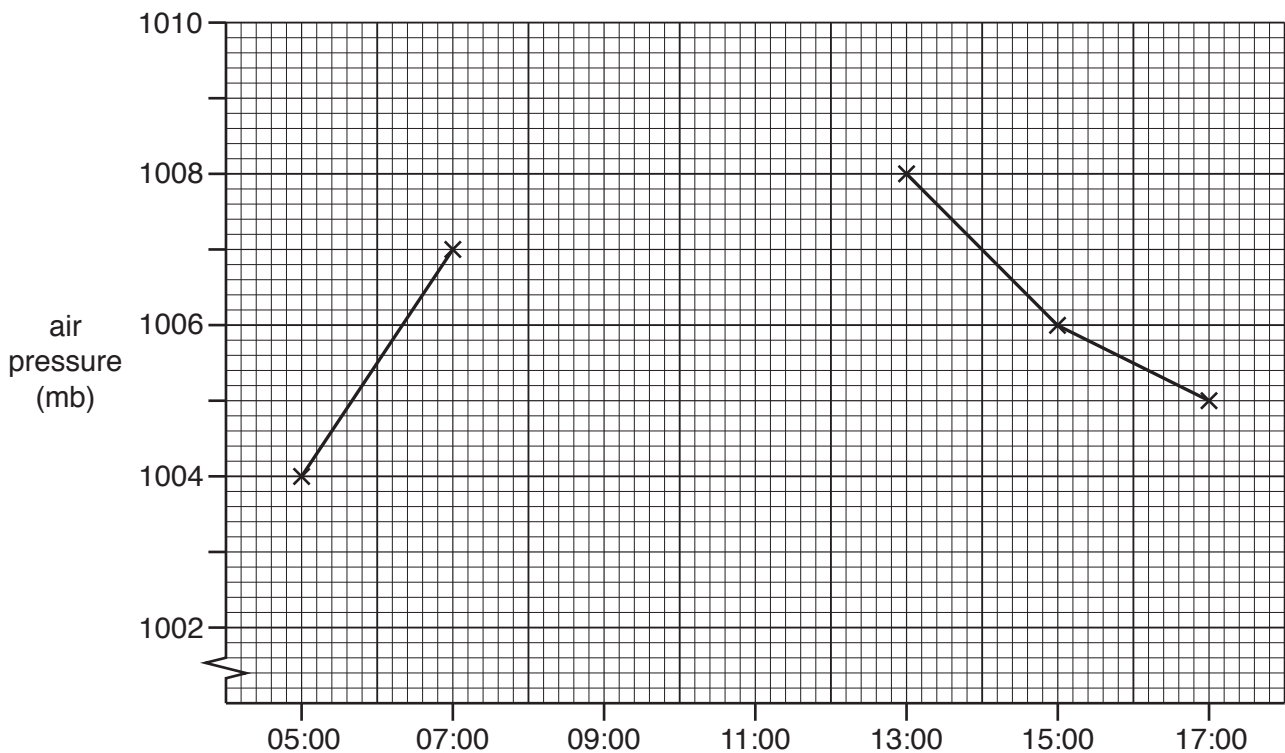


Fig. 5.2

[Total: 8]

6 Fig. 6.1 shows a systems diagram of an aluminium parts manufacturing company.

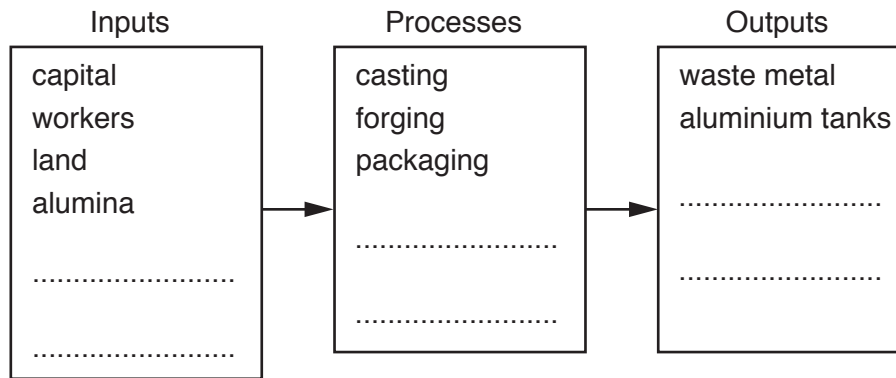


Fig. 6.1

(a) **Complete Fig. 6.1** using the following:

- electricity
- car parts.

[1]

(b) Fig. 6.2 (Insert) is a photograph showing aluminium tanks being moved along the Erie Canal in New York State, USA.

Using Fig. 6.2, suggest why these aluminium tanks are transported by boat.

.....

.....

.....

.....

.....

..... [3]

- (c) The aluminium tanks are manufactured in China, but are then exported to the USA.

Give reasons why manufactured goods made in one area are often transported long distances to other parts of the world.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

[Total: 8]

[illegible]

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