

CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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GEOGRAPHY

2217/23

Paper 2

October/November 2015

2 hours 15 minutes

Candidates answer on the Question Paper.

Additional Materials: Calculator
 Ruler
 Protractor
 Plain paper

1:50 000 Survey Map Extract is enclosed with this Question Paper.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO NOT WRITE IN ANY BARCODES.

Section A

Answer **all** questions.

Section B

Answer **one** question.

The Insert contains Photograph A for Question 2, Photograph B for Question 4, Photograph C, Table 3 and Figs 10 and 11 for Question 7, and Tables 4 and 5 and Figs 13 and 17 for Question 8.
The Survey Map Extract and the Insert are **not** required by the Examiner.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **29** printed pages, **3** blank pages and **1** Insert.

Section A

Answer **all** questions in this section.

1 Study the 1:50 000 map of Shamva, Zimbabwe.

(a) Give the six figure grid reference of the hut at The Range in the western part of the map.

.....[1]

(b) What is the land use in grid square 4689?

.....[1]

(c) Study the area of the map shown in Fig. 1. Using the map and Fig. 1, identify:

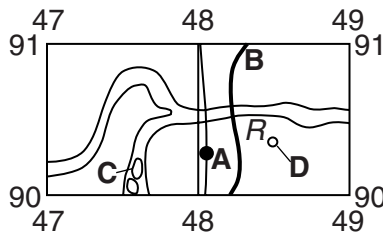


Fig. 1

(i) feature **A**;

.....[1]

(ii) feature **B**;

.....[1]

(iii) river feature **C**;

.....[1]

(iv) feature **D**.

.....[1]

(v) On Fig. 1, use an arrow to show the direction of flow of the Mazowe River.

[1]

(d) (i) Give the compass bearing **from** the trigonometrical station on Aburndale hill (505872) to the summit of Tipperary hill (498894).

.....[1]

(ii) Measure the straight line distance between these two points. Give your answer in metres.

.....[1]

(e) The road bridge at 482905 is 900 metres above sea level. Calculate the gradient of the road between this point and the spot height in 4786, a distance of 4600 metres.

Difference in height

Gradient is 1: [2]

(f) Fig. 2 is a cross-section from 450920 to 450870.

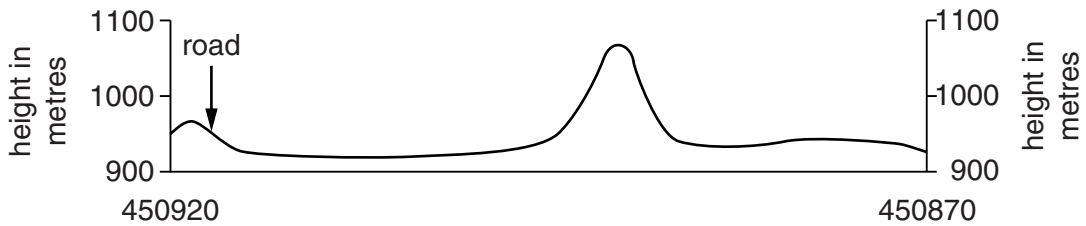


Fig. 2

On Fig. 2, use arrows, labelled with the given letters, to show:

- the summit of Chipiso (S);
- the Mazowe river (M);
- the Pote river (P);
- the extent of the cultivation south of the Pote river (C).

[5]

(g) Study the area of the map shown on Fig. 3.

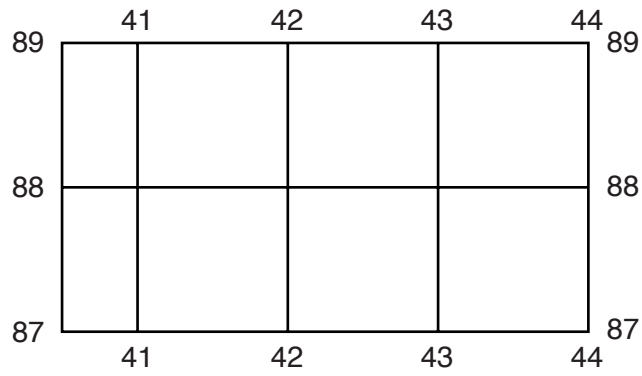


Fig. 3

Describe the relief and drainage of the area shown on Fig. 3.

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.....[4]

[Total: 20 marks]

- 2 Study Fig. 4, which shows monthly hotel use as a percentage of the annual total, for Austria, a mountainous country.

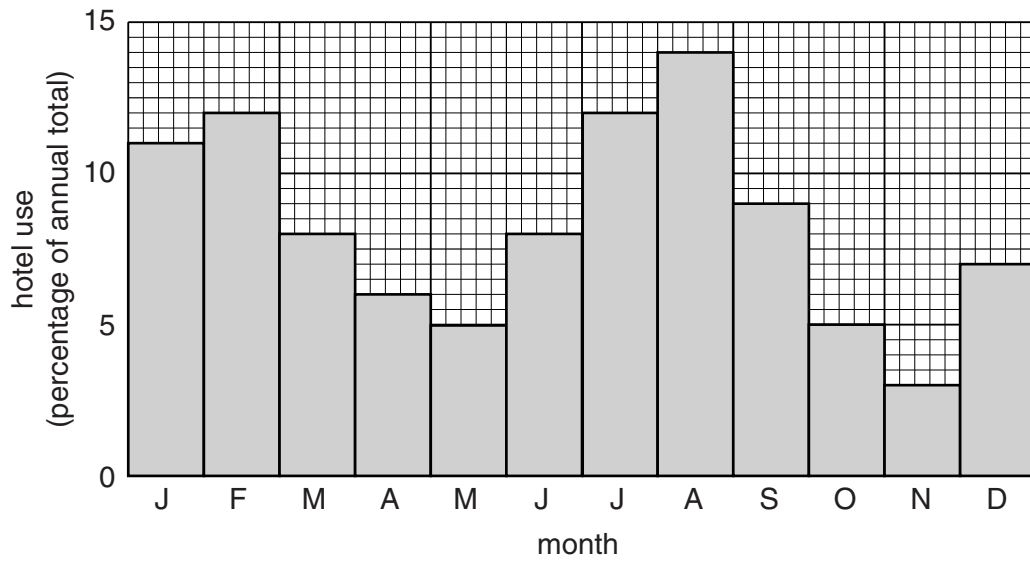


Fig. 4

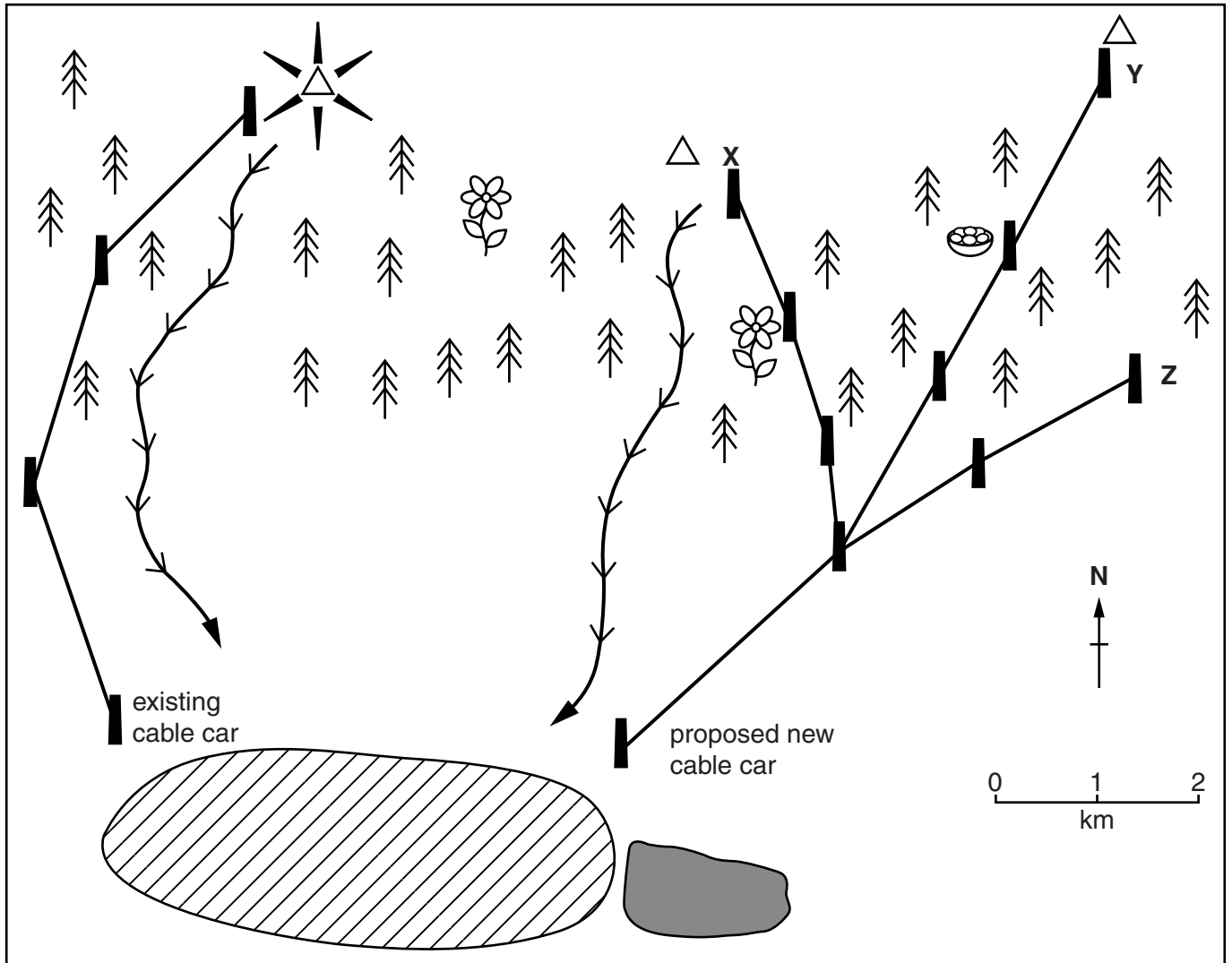
- (a) (i) Austria has **two** tourist seasons. Name the peak month for each season.

.....
[2]

- (ii) Austria is in the northern hemisphere. Name a month when many tourists visit Austria to do winter sports e.g. skiing.

.....[1]

(b) Study Fig. 5, a map which shows a mountainous area popular with tourists.



Key


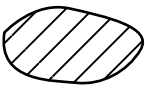

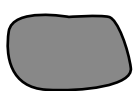




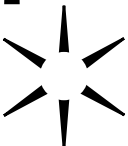
- | | | | |
|---|------------------------------------|---|--|
|  | mountain peak |  | small town with museum and nightclub |
|  | ski run |  | boating (summer)
ice skating (winter) |
|  | forest | | |
|  | flower meadow | | |
|  | nesting site for rare bird species | | |
|  | cable car route | | |
|  | viewpoint | | |

Fig. 5

(i) How is the ice skating area used in the summer?
.....[1]

(ii) Using Fig. 5, name a human attraction that is available both in summer and in winter.
.....[1]

(c) Photograph A (Insert) shows a cable car. Fig. 5 shows a proposal for a new cable car mountain transport route from the eastern end of the town. The new route will end at either **X**, **Y** or **Z**.

(i) Which route should be chosen? Give **one** advantage of this route.
Route chosen
Advantage
.....[1]

(ii) Give **one** disadvantage of each of the other routes.
Route
Disadvantage
.....
Route
Disadvantage
.....[2]

[Total: 8 marks]

3 Study Fig. 6, which shows the world's top ten rice producing countries.

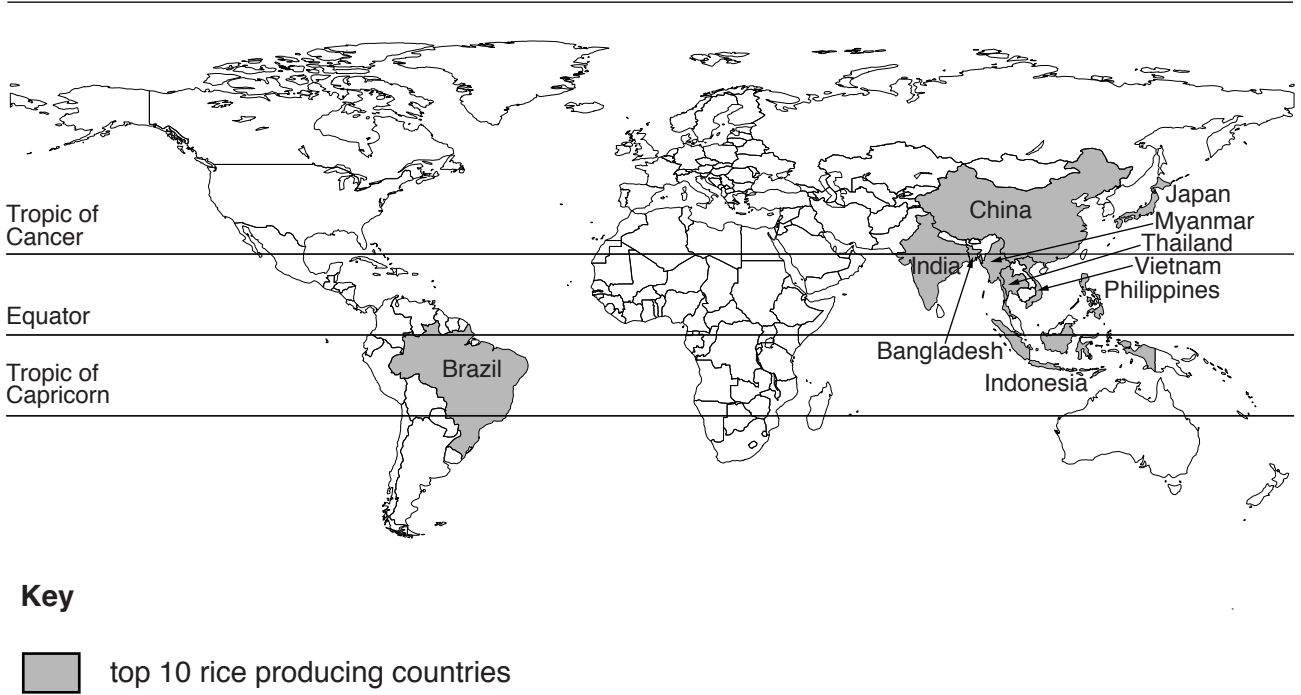


Fig. 6

(a) Describe the distribution of the world's top ten rice producing countries.

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.....[3]

(b) Study Table 1, which shows the main rice trading countries in 2012, and Fig. 6.

Table 1

Top five importing countries	Top five exporting countries
Nigeria Iran China Philippines Indonesia	Thailand Vietnam India Pakistan USA

(i) Name a rice exporting country, from Table 1, that is not one of the top ten producers.

.....[1]

(ii) Name a rice producing country, from Fig. 6, that also has to import rice.

.....[1]

(iii) Suggest why a rice producing country may also need to import rice.

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.....[3]

[Total: 8 marks]

4 Study Photograph B (Insert), which shows settlement in a rural area.

(a) Describe the location of the main settlement shown in Photograph B.

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.....
.....
.....[2]

(b) Using evidence from Photograph B **only**, suggest reasons for building a settlement at this location.

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.....
.....
.....[4]

(c) An area of new housing is to be built at **H**. Suggest **two** groups of people who would be against the plan for different reasons and explain **one** reason for each group being against the plan.

Group

Reason

.....

Group

Reason

.....[2]

[Total: 8 marks]

TURN OVER FOR QUESTION 5

5 Study Fig. 7, which shows data on sources of energy for the world's four largest energy consuming countries.

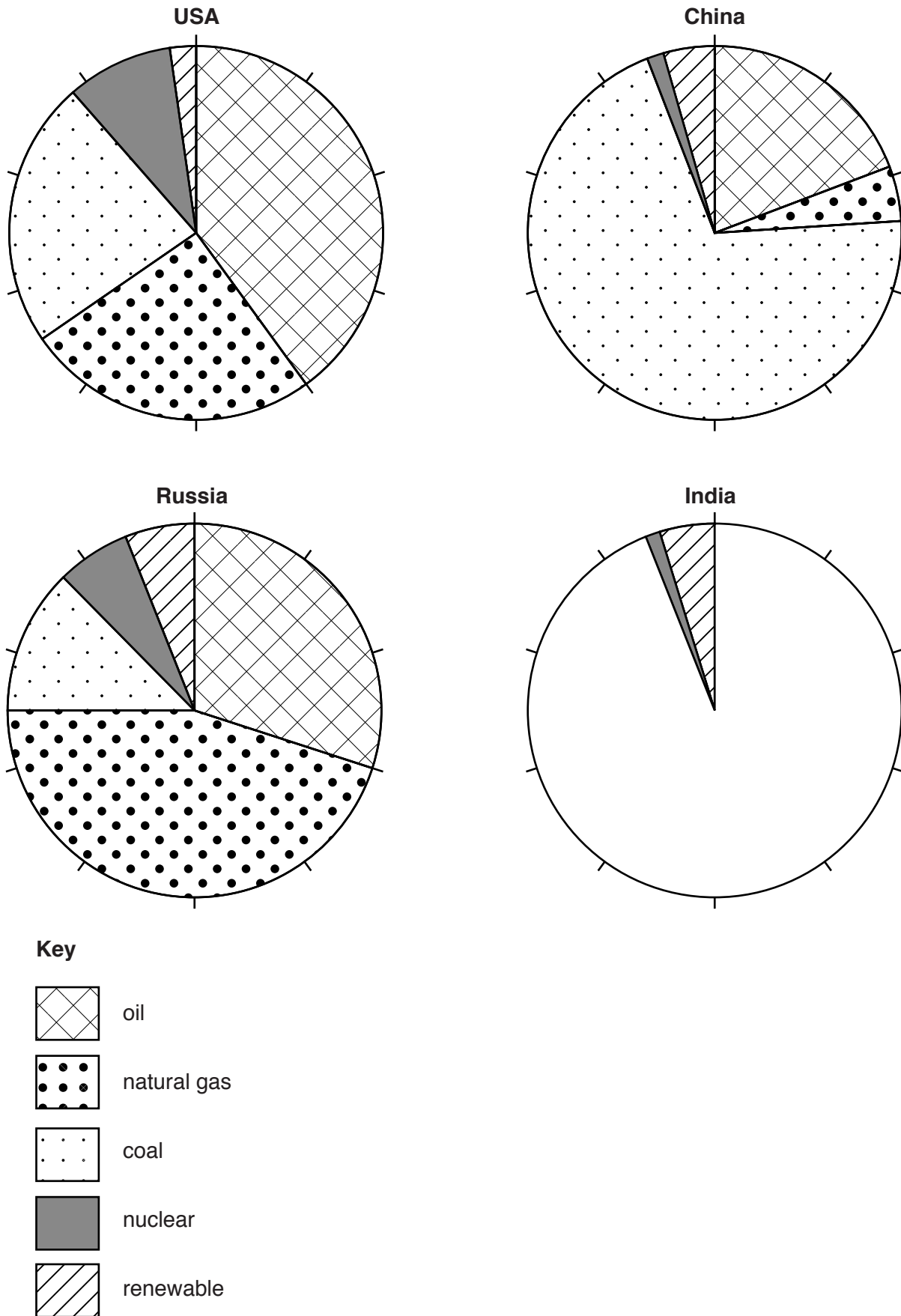


Fig. 7

(a) Use the data for India in Table 2 to complete Fig. 7. Use the key provided. [3]

Table 2

source of energy	percentage of total
Oil	32%
Natural Gas	10%
Coal	52%

(b) (i) What is the main source of energy in the USA?
.....[1]

(ii) Which country uses the greatest percentage of natural gas?
.....[1]

(iii) Using Fig. 7 and Table 2, how is the pattern of energy consumption in India similar to that of China?
.....
.....
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.....[3]

[Total: 8 marks]

6 Study Fig. 8, which shows variation in global temperatures over 2000 years.

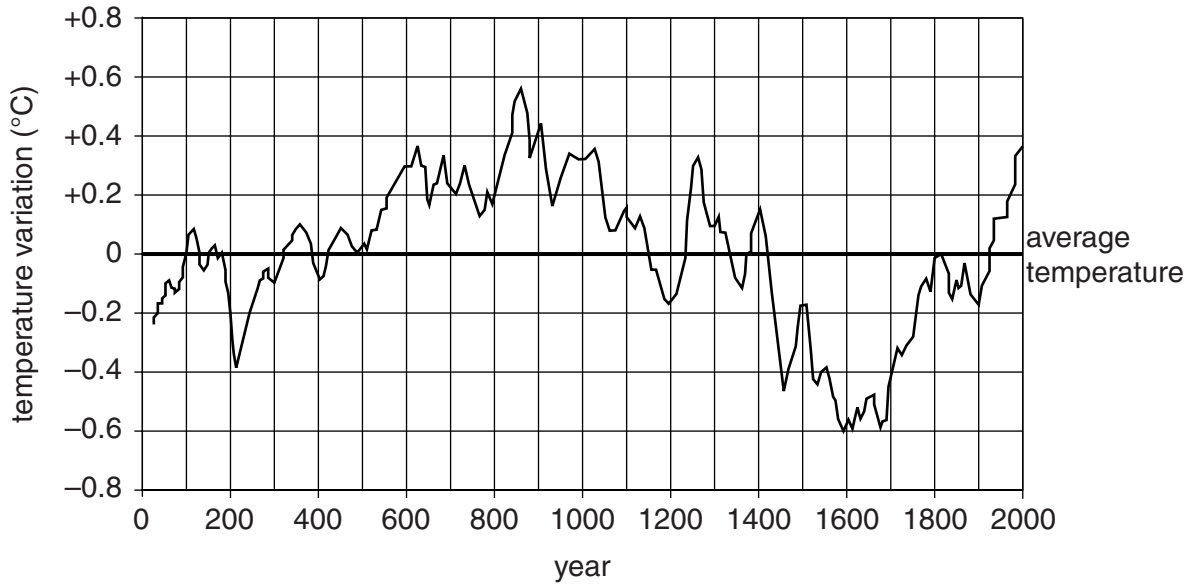


Fig. 8

- (a) (i) What was the temperature variation in the year 1500?
[1]
- (ii) When did the temperature variation first reach +0.2°C?
[1]
- (iii) What is the temperature range shown by the graph?
[1]
- (b) (i) Which of the following time periods was always warmer than the average temperature?
 Circle the correct answer.
- 200 – 400 600 – 800 1000 – 1200 1400 – 1600 1800 – 2000 [1]
- (ii) Which time period was the coolest? Circle the correct answer.
- 200 – 400 600 – 800 1000 – 1200 1400 – 1600 1800 – 2000 [1]
- (iii) During which time period was the largest range of temperature? Circle the correct answer.
- 200 – 400 600 – 800 1000 – 1200 1400 – 1600 1800 – 2000 [1]

(c) Explain why periods of higher global temperatures may result in coastal flooding.

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.....[2]

[Total: 8 marks]

Section B

Answer **one** question in this section.

- 7 A group of students went on a field visit to some coastal sand dunes. Having studied the formation of sand dunes in class, the students wanted to find out more about their shape and the different vegetation that grows on them. An area of coastal sand dunes is shown in Photograph C (Insert).

The students agreed on the following two hypotheses:

Hypothesis 1: *Vegetation cover on sand dunes increases with distance from the sea.*

Hypothesis 2: *The type of vegetation growing on sand dunes changes away from the sea.*

- (a) (i) To begin their investigation the students used a tape measure to mark a transect line across the sand dunes.

Using Fig. 9 below choose the correct line for the transect. Circle your answer below.

A B C D [1]

Possible sand dune transects

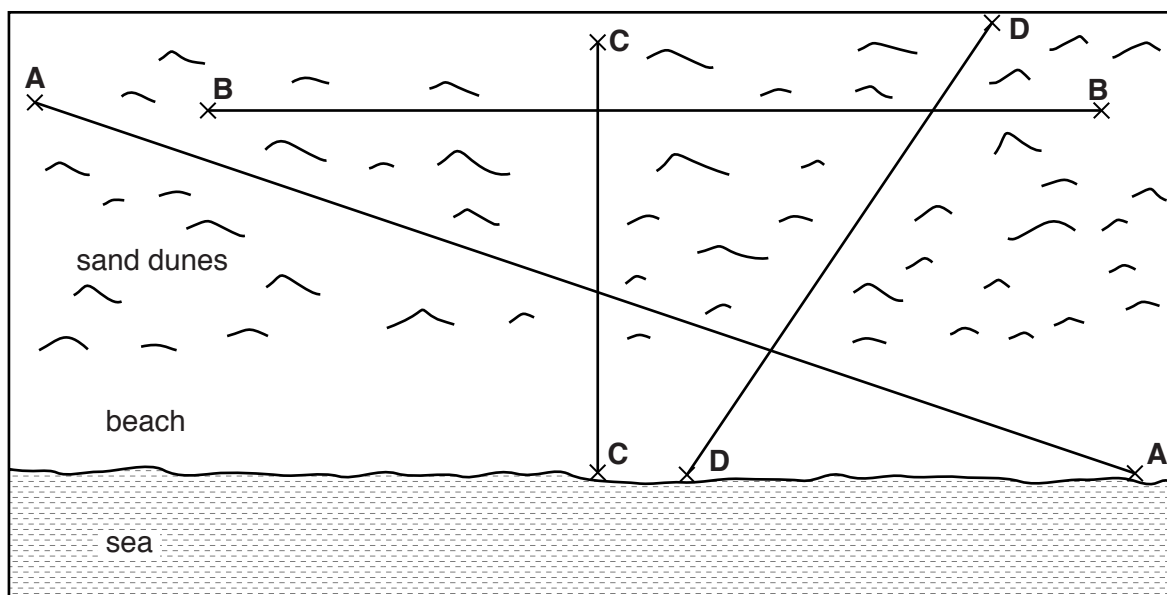


Fig. 9

- (ii) Fig. 10 (Insert) shows some of the equipment used to measure the angle of slope along a transect line. Which **two** of the following pieces of equipment are shown?

Equipment	Tick (✓)
callipers	
clinometer	
flowmeter	
hygrometer	
ranging poles	

[2]

- (iii) Explain how the students would measure the changing angle of slope along a transect line across the sand dunes.

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.....[4]

- (iv) From their measurements the students drew a profile of their transect to show the main types of dune. This is shown in Fig. 11 (Insert).

Match the following descriptions to three types of dune shown in Fig. 3. Write your answers in the table below.

Description	Type of dune
Oldest dunes which are furthest inland	
Most recently created dunes	
Tallest dunes	

[1]

- (v) Explain how sand dunes, like the ones shown in Photograph C (Insert), are formed.

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.....[3]

- (b) (i) To investigate **Hypothesis 1: Vegetation cover on sand dunes increases with distance from the sea**, the students used a quadrat to measure the vegetation cover every 20 metres along the transect. Describe how they would do this task.

.....
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.....
.....
.....
.....

[3]

- (ii) The students' results are shown in Table 3 (Insert).

Plot the results at 190m and 210m from the high water mark of the sea on Fig. 12 below. [2]

Results of vegetation cover measurement

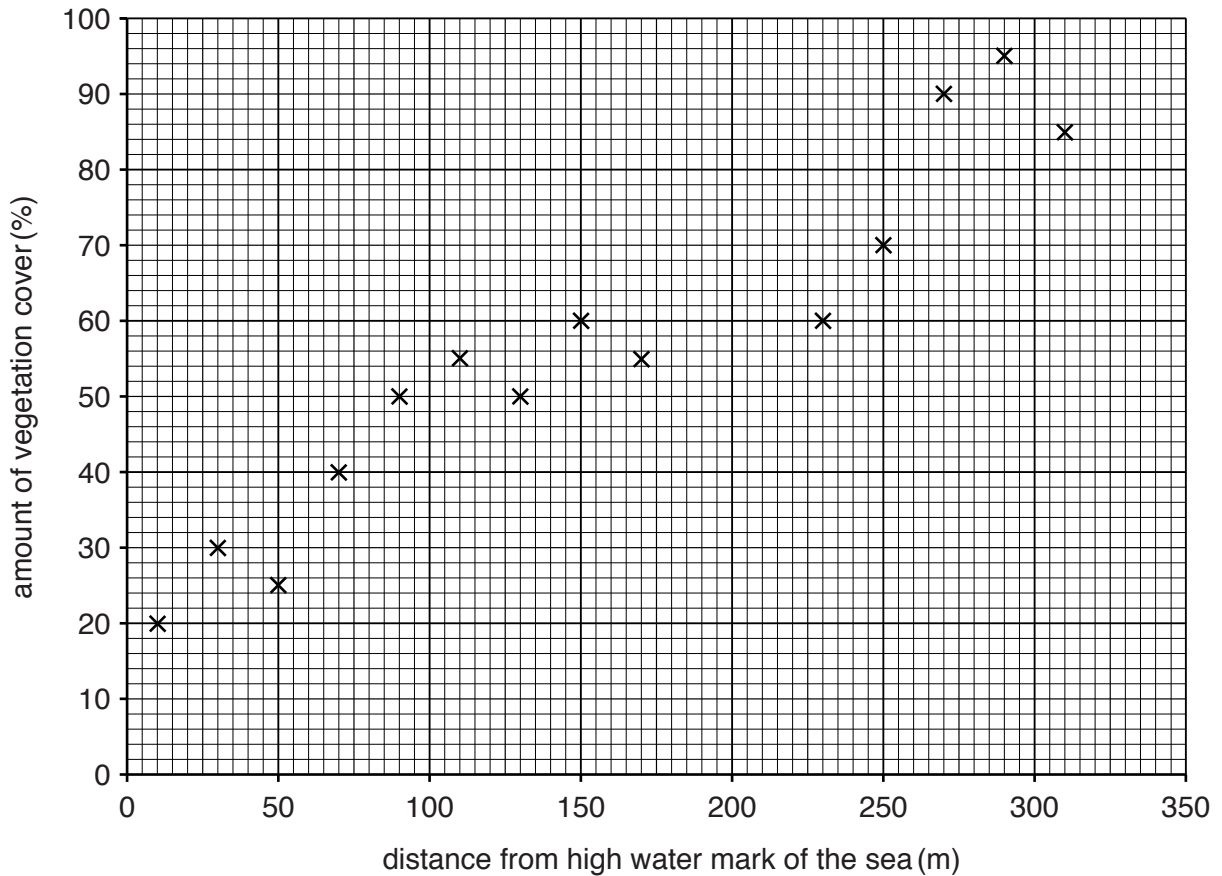


Fig. 12

(iii) To what extent is **Hypothesis 1**: *Vegetation cover on sand dunes increases with distance from the sea* true? Use evidence from Fig. 12 and Table 3 to support your conclusion.

.....
.....
.....
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.....
.....
.....[3]

(c) To investigate **Hypothesis 2**: *The type of vegetation growing on sand dunes changes away from the sea*, the students recorded the main type of vegetation at each sample site along their transect. These results are also shown in Table 3 (Insert).

(i) At first the students could not identify some of the types of vegetation. Suggest **two** ways that they found out what they were.

1
.....
2
.....[2]

(ii) Suggest **one** disadvantage of the students only recording the main type of vegetation at each sampling site.

.....
.....[1]

(iii) When they studied their results the students agreed that **Hypothesis 2**: *The type of vegetation growing on sand dunes changes away from the sea* was true. Give **two** pieces of evidence from Table 3 to support their conclusion.

1
.....
2
.....[2]

- (d) (i) While doing their fieldwork the students realised that the sand dunes were a popular destination for tourists.

Describe how tourists may affect the vegetation growing on sand dunes.

.....
.....
.....
.....[2]

- (ii) Suggest how tourism could be managed to protect the dunes and vegetation from visitors?

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.....[4]

[Total: 30 marks]

TURN PAGE FOR QUESTION 8

8 A large new shop was opened in the CBD of a town in the UK. Students from a local school decided to investigate the impact of the shop on the town centre. Fig. 13 (Insert) shows the location of the shop in the CBD of the town.

(a) (i) What does *CBD* stand for?

.....[1]

(ii) Which **one** of the following is **least** likely to be located in the CBD of a town? Tick your choice in the table below.

	Tick (✓)
government building	
train station	
factory	
theatre	
bank	

[1]

The students agreed on the following hypotheses:

Hypothesis 1: *Opening the new shop has had a positive economic impact on the town centre.*

Hypothesis 2: *Opening the new shop has had a negative impact on the environment of the town centre.*

(b) To test **Hypothesis 1** the students produced a questionnaire to use with people in the town centre.

(i) The teacher gave the students the questionnaire to use.

Give **three** pieces of advice the teacher would have given the students about how to use it.

1

.....

2

.....

3

.....[3]

- (ii) The questionnaire is shown in Fig. 6 below. In the spaces provided on Fig. 14, add two other age groups which are appropriate for classifying the people interviewed. Two age groups have already been included. [2]

Questionnaire

Hello, I am studying Geography at Rymer College. Please will you complete the following questionnaire to help me complete my geography fieldwork?

Gender Male Female

Age group

 Under 15 _____ _____ Over 60

What do you think about the large new shop which has been opened in the town centre?

For each of the following statements circle the answer which matches your opinion.

1. The shop has brought a larger variety of goods and services to the town centre.

Agree strongly Agree Disagree Disagree strongly

2. The shop attracts people to come to the town centre more often.

Agree strongly Agree Disagree Disagree strongly

3. The shop has provided more jobs in the town centre.

Agree strongly Agree Disagree Disagree strongly

4. The shop has meant increased competition for other shops in the town centre.

Agree strongly Agree Disagree Disagree strongly

Thank you for your time.

Fig. 14

- (iii) The students used the questionnaire with 100 people. Their results are shown in Table 4 (Insert). Use these results to complete Fig. 15 below. [2]

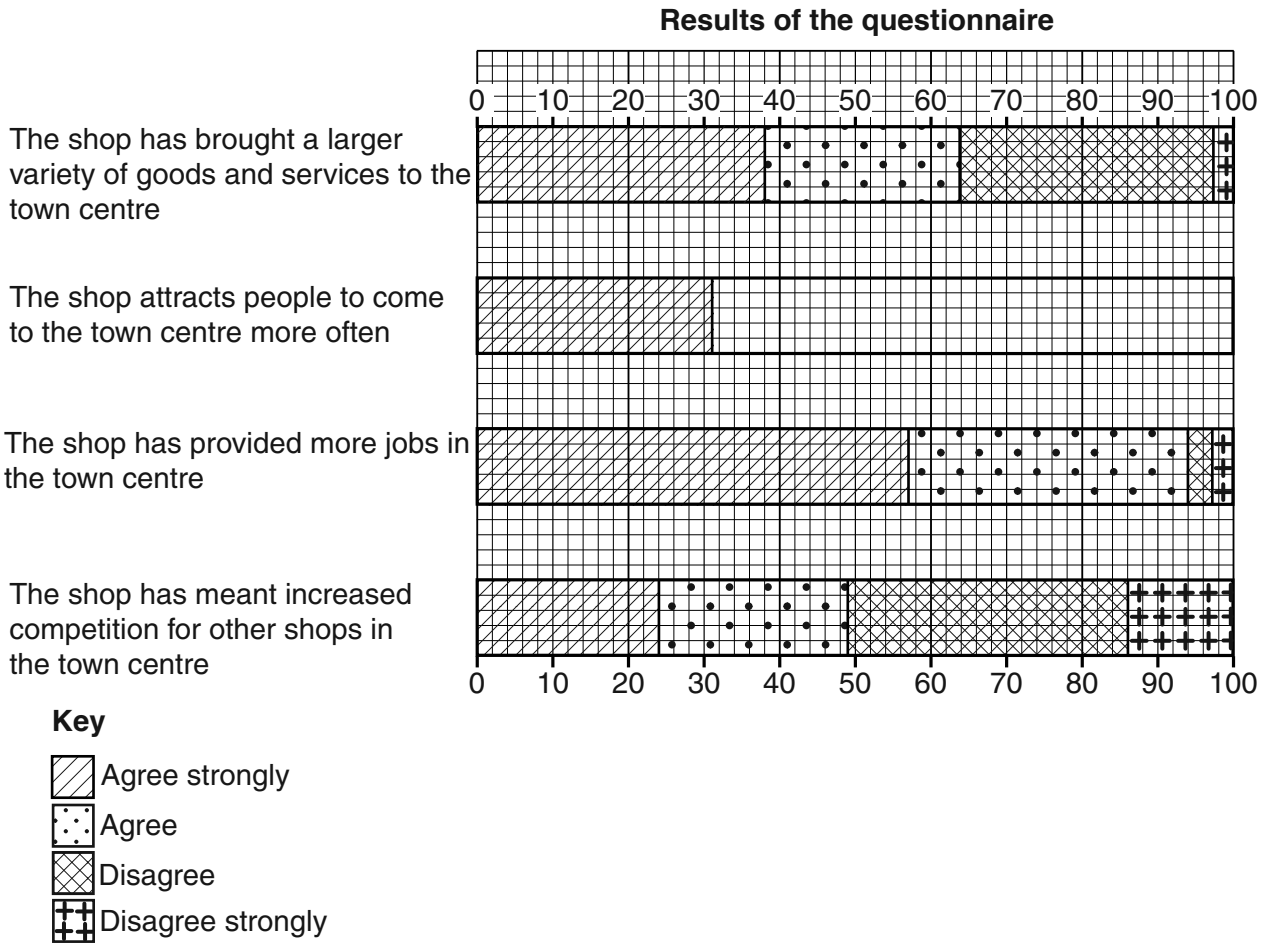


Fig. 15

- (iv) One student did a further calculation for each statement to see how positive people were about the shop. This calculation is shown for Statement 1 below.

Statement 1: The shop has brought a larger variety of goods and services to the town centre.

Opinion	Number of answers	Weighting	Score
Agree strongly	38	+2	+76
Agree	26	+1	+26
Disagree	33	-1	-33
Disagree strongly	3	-2	-6
Total score			+63

Complete the table below to show the student's calculation for Statement 2.

Statement 2: The shop attracts people to come to the town centre more often.

Opinion	Number of answers	Weighting	Score
Agree strongly	31	+2	
Agree	40	+1	
Disagree	20	-1	
Disagree strongly	9	-2	
Total score			

[2]

(v) Plot the total score which you calculated for Statement 2 in Fig. 16 below.

[1]

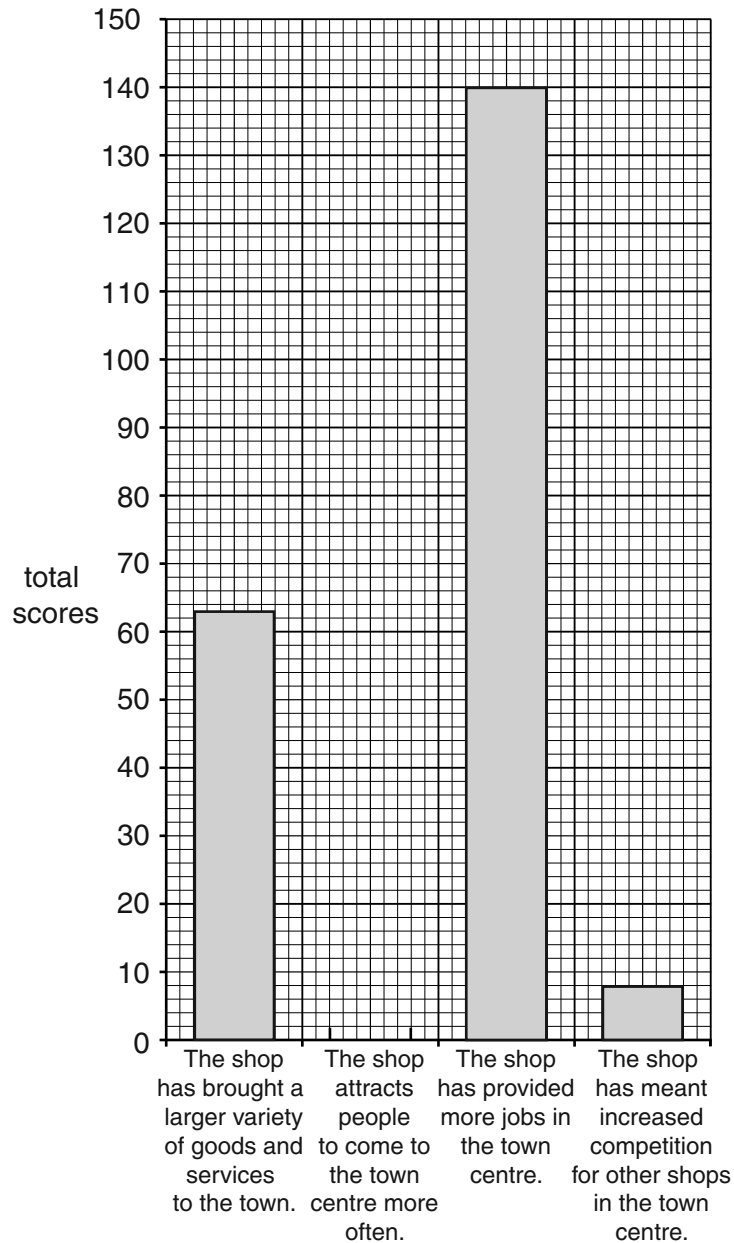


Fig. 16

(vi) What conclusion would the students make about **Hypothesis 1**: *Opening the new shop has had a positive economic impact on the town centre*? Use evidence from Figs 15 and 16 to support your answer.

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.....[4]

(c) To investigate **Hypothesis 2**: *Opening the new shop has had a negative impact on the environment of the town centre*, the students did an environmental quality survey at five locations in the town centre. The recording sheet which they used is shown in Fig. 17 (Insert).

(i) How might the following difficulties of using the scoring sheet be overcome?

The scoring is subjective and scores may vary between students.

.....

.....

The score may vary at different times.

.....

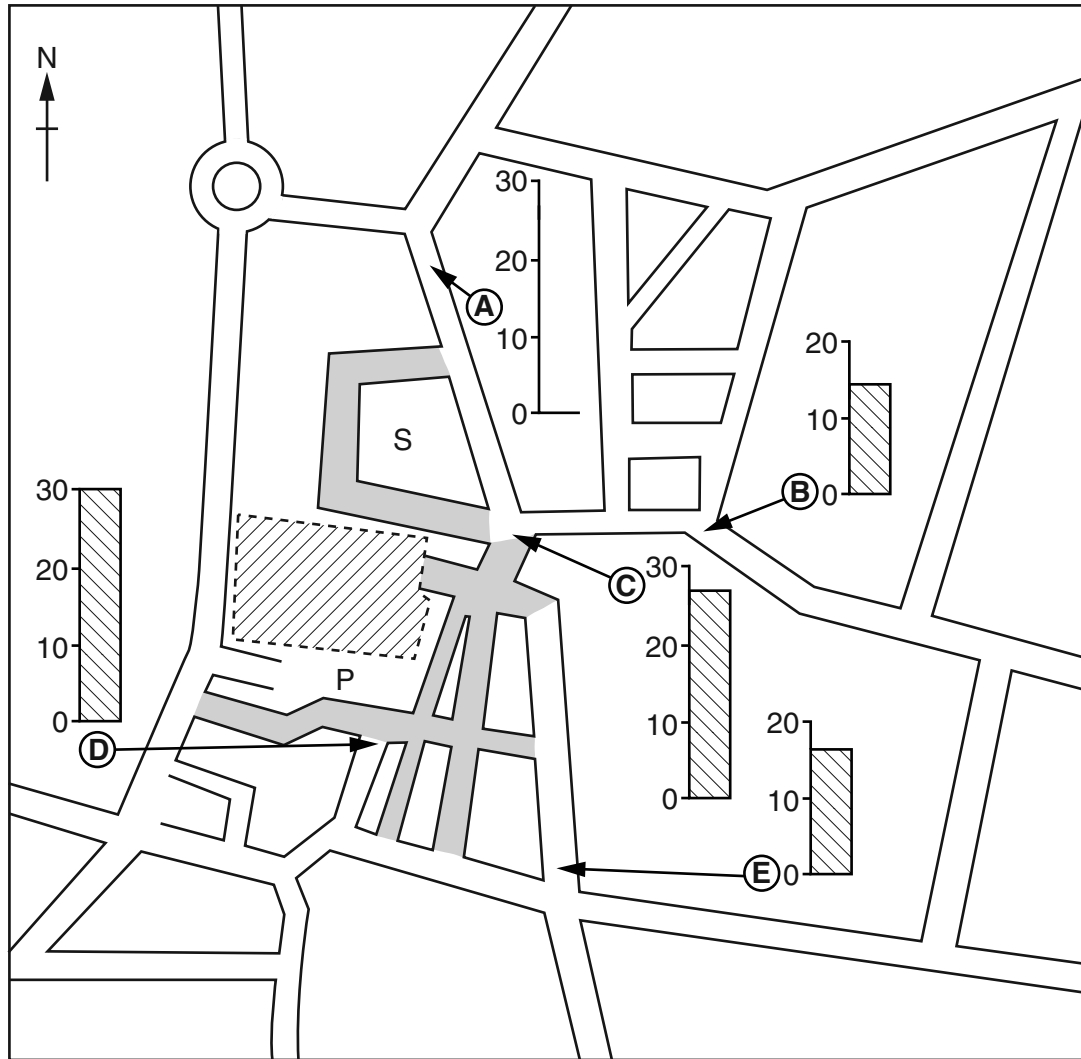
.....[2]

(ii) The results of the environmental quality survey are shown in Table 5 (Insert).



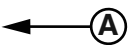
Complete Fig. 18 below by plotting the total score for location **A**.

[1]

Results of environmental quality survey



Key

-  new shop
- P** shop car park
- S** indoor shopping area
-  restricted access for vehicles
-  location of survey points

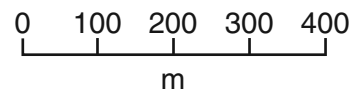


Fig. 18

(ii) How should the students organise and complete the pedestrian count?

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.....[4]

[Total: 30 marks]

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