

Write your name here

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**Pearson Edexcel Certificate**  
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**International GCSE**

Centre Number	Candidate Number
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# Geography

**Unit: KGE0/4GE0**  
**Paper: 01**

Tuesday 13 May 2014 – Afternoon <b>Time: 3 hours</b>	Paper Reference <b>KGE0/01</b> <b>4GE0/01</b>
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<b>You must have:</b> Ruler, pencil and pen	Total Marks
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### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **seven** questions
  - Answer **two** questions in Section A
  - Answer **two** questions in Section B
  - Answer **two** questions in Section C – **either** Question 7 **or** 8 **AND either** Question 9 or 10
  - Answer **one** question in Section D.
- Answer the questions in the spaces provided
  - *there may be more space than you need.*

### Information

- The total mark for this paper is 180.
- The marks for **each** question are shown in brackets
  - *use this as a guide as to how much time to spend on each question.*
- The following abbreviations are used:
  - LIC – Low-income country
  - HIC – High-income country
  - NIC – Newly-industrialised country

### Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.
- Write your answers neatly and in good English.

Turn over ►

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**PEARSON**

## SECTION A – THE NATURAL ENVIRONMENT

Answer TWO questions only from this section.

Indicate which question you are answering by marking a cross . If you change your mind, put a line through the box  and then indicate your new question with a cross .

If you answer Question 1 put a cross in the box .

### 1 River environments

(a) Study Figure 1 which shows the hydrological cycle.

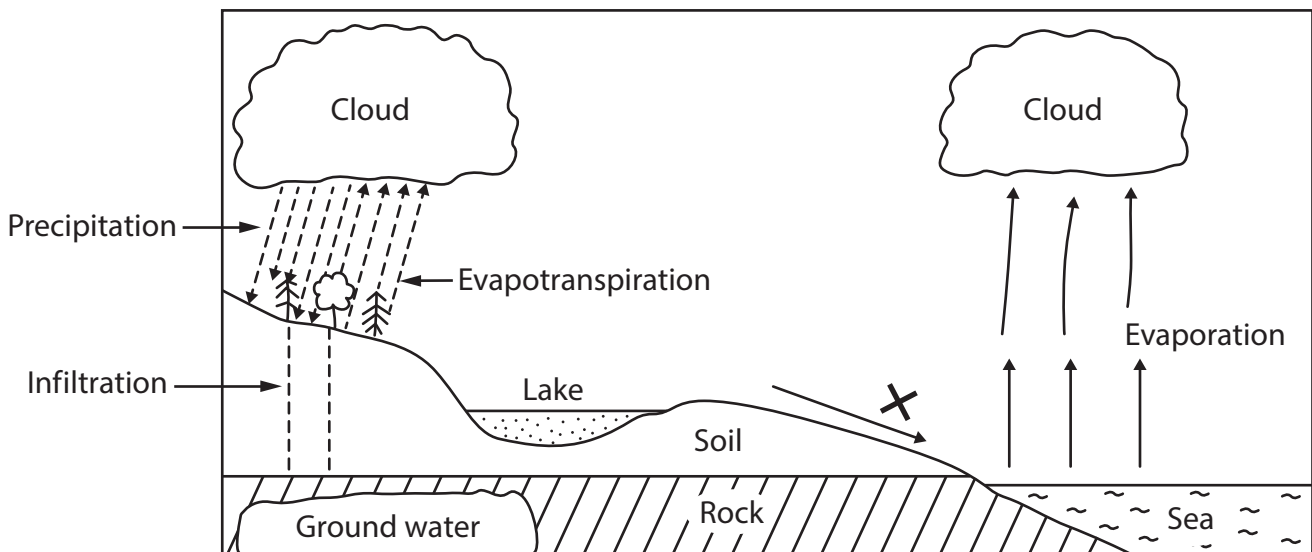


Figure 1

(i) Identify the transfer shown by X.

Put a cross in the correct box.

(1)

- A** runoff
- B** throughflow
- C** watershed
- D** interception



(ii) Name **one** store of water shown in Figure 1.

(1)

(iii) Suggest why the term **cycle** is used to describe the processes shown in Figure 1.

(2)

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(b) (i) What is a **river regime**?

(2)

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(ii) Outline **two** factors that affect a river regime.

(4)

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(c) Explain **two** physical features of a drainage basin.

Diagrams may help your answer.

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(d) Discuss the reasons for variations in the quality of river water.

Reference to examples, including fieldwork, may help your answer.

(9)

Area with horizontal dotted lines for writing the answer.

**(Total for Question 1 = 25 marks)**



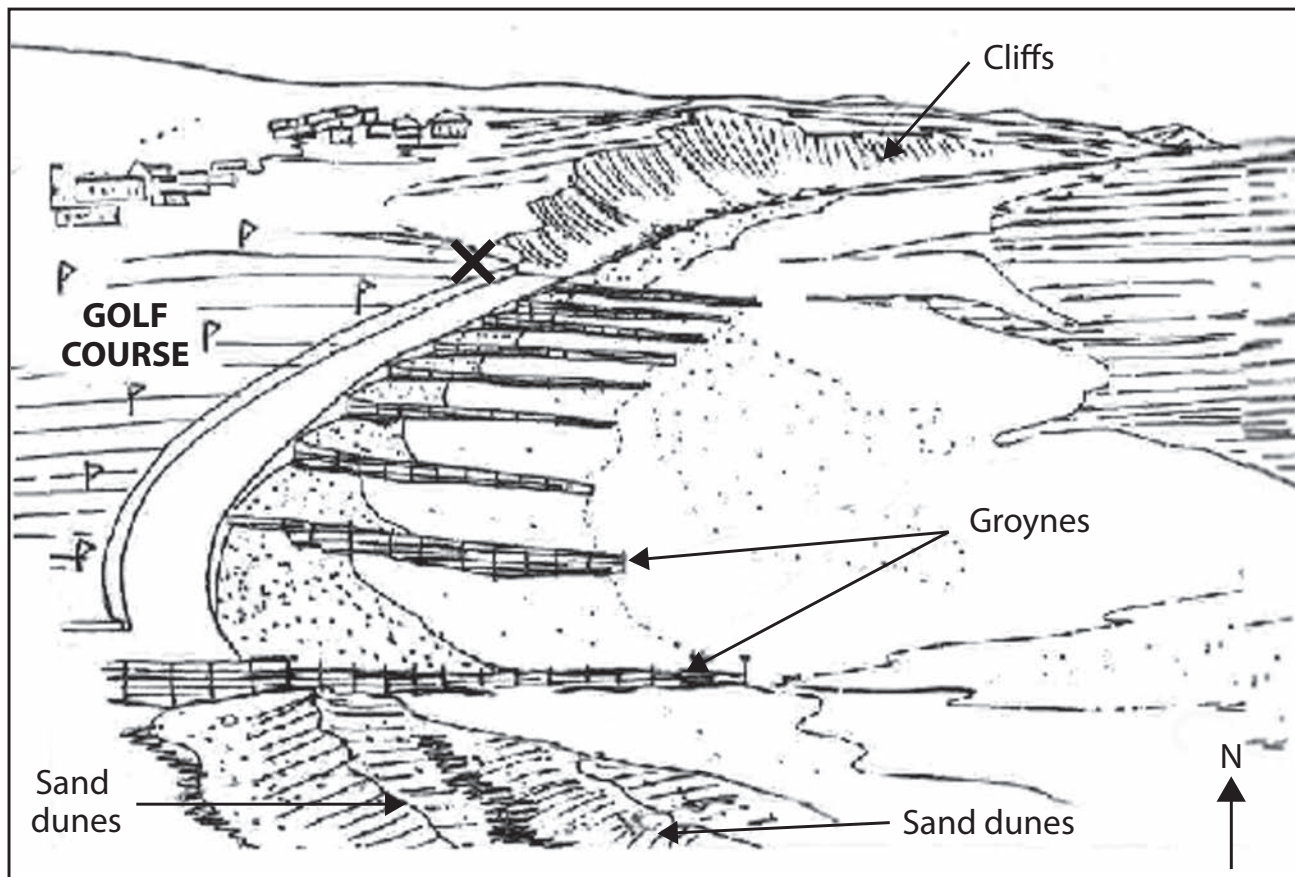
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If you answer Question 2 put a cross in the box  .

## 2 Coastal environments

(a) Study Figure 2 which shows a stretch of coastline in the UK.



**Figure 2**

(i) What evidence is there that the direction of longshore drift is southwards?

(1)





(ii) According to Figure 2, what was the main reason for building the groynes?

Put a cross in the correct box.

(1)

- A** to encourage tourism
- B** to prevent cliff retreat
- C** to slow down beach removal
- D** to improve beach access

(iii) The owners of the golf course want to build a large hotel on the sea front at **X**.

Suggest **one** conflict that might arise from this proposal.

(2)

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(b) (i) What are **sub-aerial** processes?

(2)

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(ii) Outline **two** ways in which sub-aerial processes can affect the rate of cliff retreat.

(4)

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(c) Explain how geology affects **two** different coastal landforms.

Diagrams may help your answer.

(6)

Landform 1 .....

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Landform 2 .....

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(d) Discuss how coastal development can threaten coastal ecosystems.

Reference to examples, including fieldwork, may help your answer.

(9)

Area with horizontal dotted lines for writing the answer.

**(Total for Question 2 = 25 marks)**



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If you answer Question 3 put a cross in the box .

### 3 Hazardous environments

- (a) Study Figure 3 which shows the location of a recent earthquake that affected Japan.

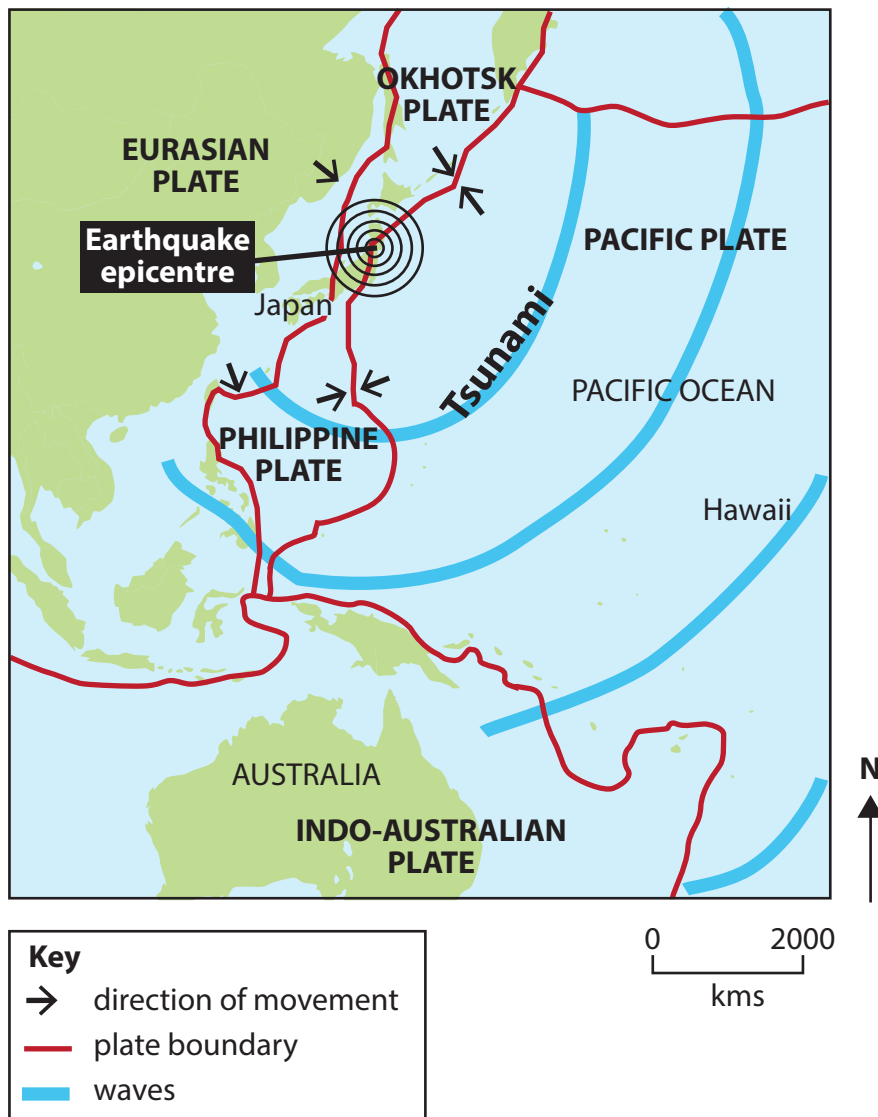


Figure 3

- (i) What is the **epicentre** of an earthquake?

Put a cross in the correct box.

(1)

- A** a point on the Earth's surface directly above the earthquake's origin
- B** a place where the earthquake started
- C** a place where the earthquake caused most damage
- D** a place where earthquakes often occur



(ii) What term is given to the giant slabs of crust that make up the Earth's surface?

(1)

(iii) Outline why Japan is a hazardous place.

Use information from Figure 3 in your answer.

(2)

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(b) (i) What is a **natural disaster**?

(2)

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(ii) Give **two** reasons why people continue to live in areas at risk from hazard events.

(4)

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(c) Explain **two** characteristics of a tropical storm.

Diagrams may help your answer.

(6)

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**SECTION B – PEOPLE AND THEIR ENVIRONMENTS****Answer TWO questions only from this section.****If you answer Question 4 put a cross in the box  .****4 Economic activity and energy**

(a) Study Figure 4 which shows a location where electricity is being produced.



**Figure 4**

(i) Name the energy that is being converted into electricity.

Put a cross in the correct box.

(1)

- A** geothermal heat
- B** solar radiation
- C** wind
- D** nuclear

(ii) Suggest **one** reason why this is a good location for producing electricity by this means.

(1)



(iii) Give **one** advantage and **one** disadvantage of using renewable sources of energy.

(2)

Advantage

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Disadvantage

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(b) (i) What is meant by the term **economic sector**?

(2)

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(ii) Outline **two** factors responsible for the growth of tertiary and quaternary activities.

(4)

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If you answer Question 5 put a cross in the box  .

## 5 Ecosystems and rural environments

(a) Study Figure 5 which shows an area of farming.



Figure 5

(i) Name the type of farming shown.

Put a cross in the correct box.

(1)

- A** arable
- B** mixed
- C** pastoral
- D** subsistence

(ii) What is happening at **X** in Figure 5 to increase agricultural production?

(1)

(iii) Give **two** other ways of increasing agricultural production.

(2)

1 .....

2 .....





(b) (i) What is meant by **rural accessibility**?

(2)

(ii) Outline **two** characteristics of rural environments other than accessibility.

(4)

1

2

(iii) Explain the changes taking place in some HIC rural settlements.

Reference to examples may help your answer.

(6)



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If you answer Question 6 put a cross in the box  .

## 6 Urban environments

- (a) Study Figure 6 which shows a squatter settlement and nearby modern housing in Nairobi, Kenya.



**Figure 6**

- (i) Identify **one** feature of the modern housing shown in Figure 6.

(1)

- (ii) Identify **two** characteristics of the squatter settlement shown in Figure 6.

(2)

1 .....

2 .....









## SECTION C – PRACTICAL GEOGRAPHICAL ENQUIRY

Answer **TWO** questions from this section

**EITHER** Question 7 or 8 **AND EITHER** Question 9 or 10.

If you answer Question 7 put a cross in the box  .

### 7 River environments fieldwork

- (a) Study Figure 7a which shows a group of students investigating the characteristics of a river channel.



**Figure 7a**

- (i) Which **one** of the following pieces of field equipment are the students using?

Put a cross in the correct box.

(1)

- A** quadrat
- B** ranging pole
- C** metre ruler
- D** calipers





(ii) Describe how this piece of field equipment might be used in the collection of river channel data.

(3)

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(iii) Outline **two** factors that should be considered when choosing a suitable site to collect river channel data.

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(b) Study Figure 7b which shows some channel data for five sites (A to E) along a river.

Site	Width (m)	Average depth (cm)	Cross-sectional Area (m <sup>2</sup> )	Bed roughness *
A	1.3	11	0.14	5
B	1.7	20	0.34	4
C	2.9	14	0.46	3
D	5.4	22	1.19	2
E	3.9	29	1.13	2

\* RIVER BED ROUGHNESS

1 = smooth, uniform bed, e.g. silt

2 = smooth fairly uniform bed, e.g. sand and shingle

3 = undulating bed, e.g. gravel, some weeds

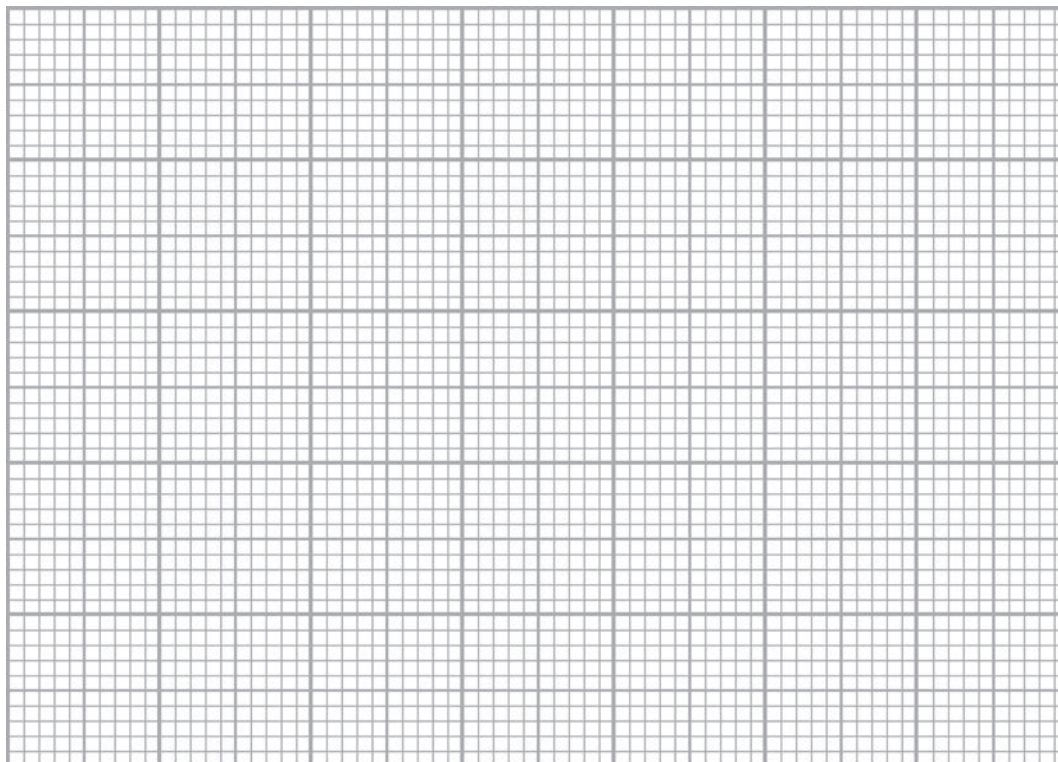
4 = irregular bed, e.g. pebbles and small boulders, weeds

5 = very irregular bed, e.g. large boulders, many weeds

**Figure 7b**

(i) Draw a labelled graph below (Figure 7c) to present the data for cross-sectional area and bed roughness at each of the five sites in Figure 7b.

(4)



**Figure 7c**



(ii) Justify your choice of data presentation technique in Figure 7c.

(3)

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(iii) What conclusions about variations in the river channel can you reach from analysing the data in Figure 7b?

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(iv) Comment on how you might try to ensure that the river channel data collected is as accurate and reliable as possible.

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**(Total for Question 7 = 25 marks)**

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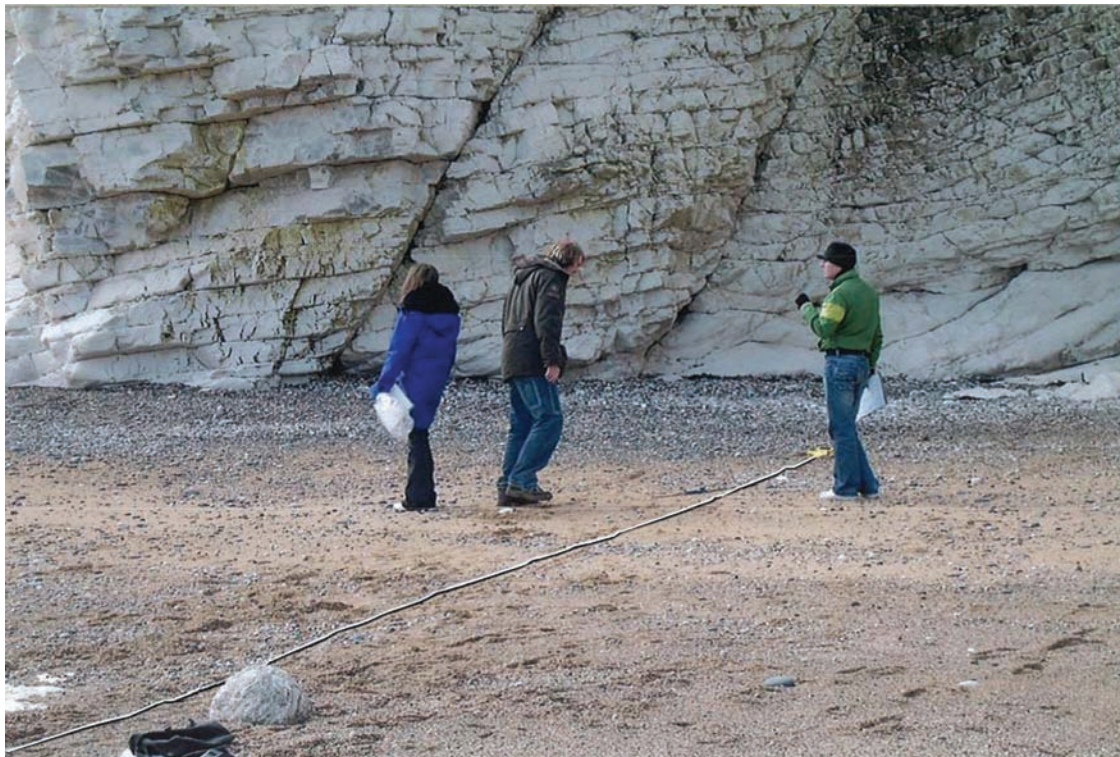
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If you answer Question 8 put a cross in the box  .

## 8 Coastal environments fieldwork

(a) Study Figure 8a which shows a group of students investigating a beach.



**Figure 8a**

(i) Which **one** of the following pieces of field equipment are the students using?

Put a cross in the correct box.

(1)

- A** quadrat
- B** ranging pole
- C** tape measure
- D** calipers



(ii) Describe how this piece of field equipment might be used in the collection of beach data.

(3)

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(iii) Outline **two** factors that should be considered when choosing a suitable site to collect beach data.

(4)

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- (b) Study Figure 8b which shows data collected at five sites (A to E) along a beach transect from the foot of the cliff to the sea.

Site	Distance from cliff (m.)	Height above sea level (cm.)	Slope angle (degrees)	Sediment size *
A	0	100	–	4
B	4	90	3	2
C	8	60	15	3
D	12	50	10	3
E	16	25	5	2

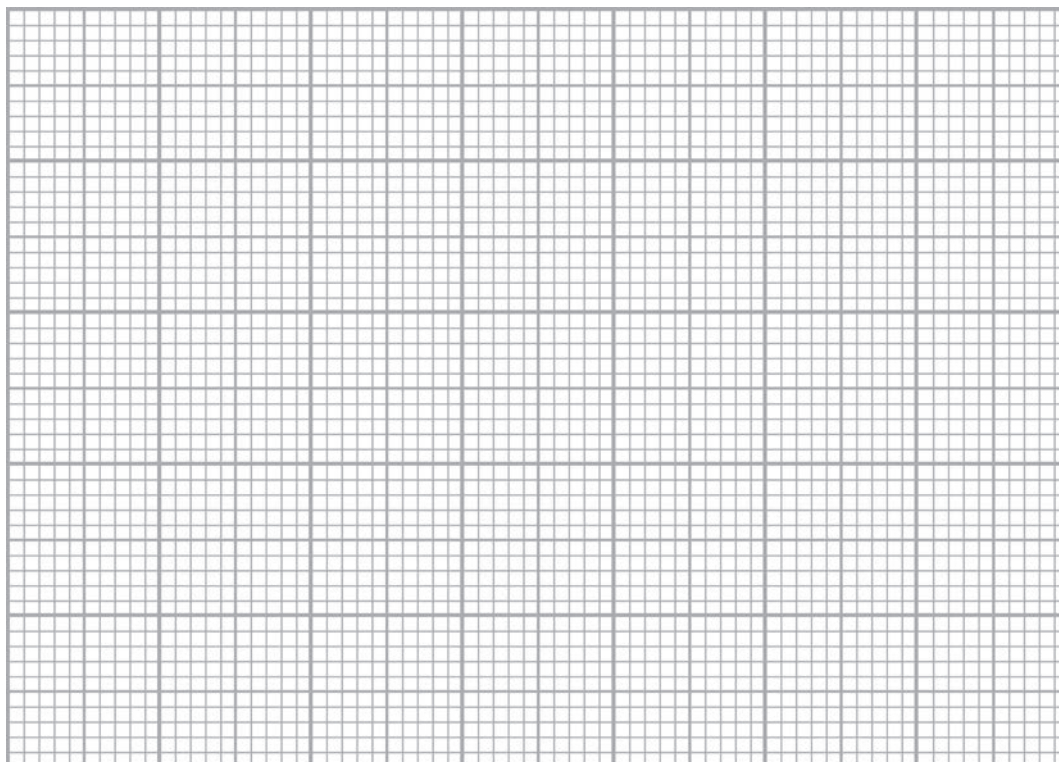
\* SEDIMENT SIZE

- 1 = fine sand
- 2 = granules (coarse sand/fine gravel)
- 3 = pebbles/gravel
- 4 = cobbles
- 5 = boulders

**Figure 8b**

- (i) Draw a labelled graph below (Figure 8c) to present the data for sediment size and distance from the cliff at each of the five sites in Figure 8b.

(4)



**Figure 8c**







(iv) Comment on how you might try to ensure that the beach data collected is as accurate and reliable as possible.

(4)

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**(Total for Question 8 = 25 marks)**

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If you answer Question 9 put a cross in the box  .

## 9 Economic activity and energy fieldwork

(a) Study Figure 9a which shows a questionnaire designed for use in an investigation.

<b>QUESTIONNAIRE</b>			
1. What is your age? Under-30 ( )			
30 & over ( )			
2. Do you believe that governments should encourage the use of renewable sources?			
			Yes No Undecided
			( ) ( ) ( )
3. Should more or less use be made in the future of each of the following sources of energy?			
	More	Less	Undecided
Solar	( )	( )	( )
Wind	( )	( )	( )
Nuclear	( )	( )	( )
Oil and Gas	( )	( )	( )
Coal	( )	( )	( )

**Figure 9a**

(i) Suggest **one** possible aim of this investigation.

(1)





(b) Study Figure 9b which shows the responses given by 100 people to the questionnaire in Figure 9a.

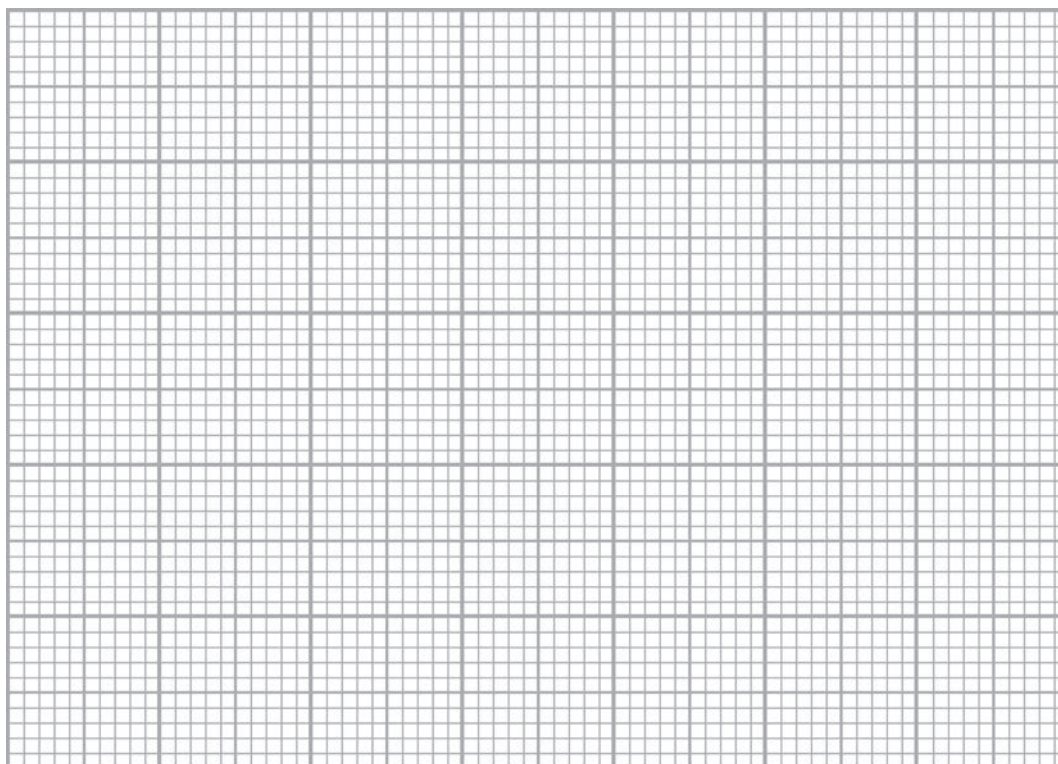
**Future use of energy sources**

Energy source	Solar		Wind		Nuclear		Oil & gas		Coal	
	Under 30	30 & over	Under 30	30 & over	Under 30	30 & over	Under 30	30 & over	Under 30	30 & over
Use more	30	38	40	12	7	30	2	6	4	10
Use less	3	4	2	18	17	9	30	19	20	27
Undecided	10	15	20	8	20	17	30	13	27	12

**Figure 9b**

(i) Draw a labelled graph below (Figure 9c) to present the "Use more" totals among under 30s for each of the five energy sources.

(4)



**Figure 9c**





(iv) Comment on other information you might need in an investigation on the future use of energy sources.

(4)

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**(Total for Question 9 = 25 marks)**

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If you answer Question 10 put a cross in the box  .

### 10 Urban environments fieldwork

- (a) Study Figure 10a which shows data being recorded during an urban fieldwork investigation.

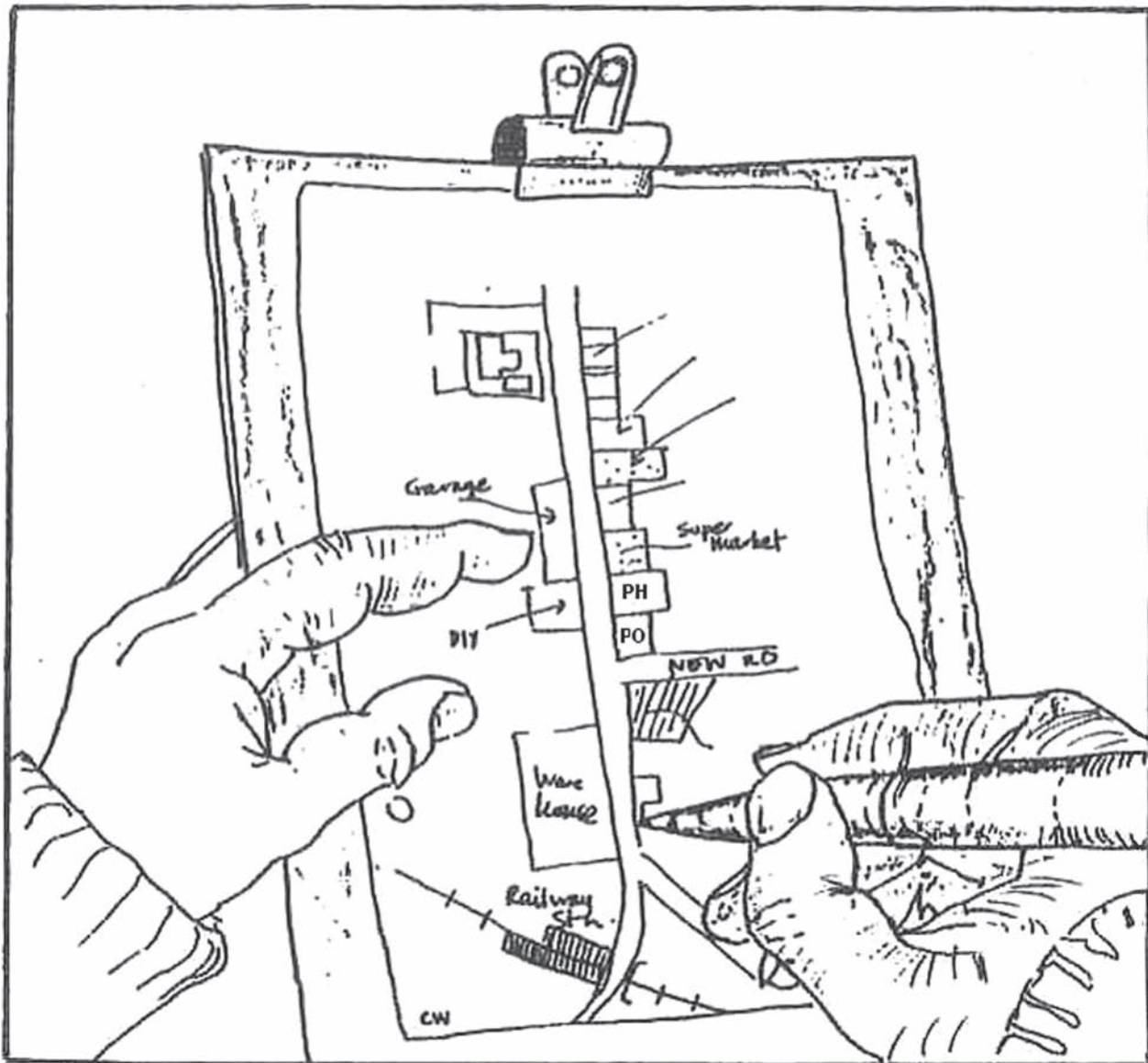


Figure 10a

- (i) Suggest **one** possible aim of this investigation.

(1)



(ii) Outline how you would attempt to ensure that the data collected was as **accurate** as possible.

(3)

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(iii) Describe **two** possible risk assessments that need to be made with this type of fieldwork.

(4)

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(b) Study Figure 10b which shows the data collected in the urban fieldwork investigation along a transect extending outwards from the town centre.

Sampling site	1	2	3	4	5	6	7	8	9	10	11
Distance from town centre (metres)	0	100	200	300	400	500	600	700	800	900	1000
Building height (in storeys)	4	3	4	12	8	0	2	1	6	0	2
Use	PB	E	SO	SO	E	OS	T	SO	R	OS	R
Building age	i	i	ii	iv	iv	-	iv	iii	iii	-	iv

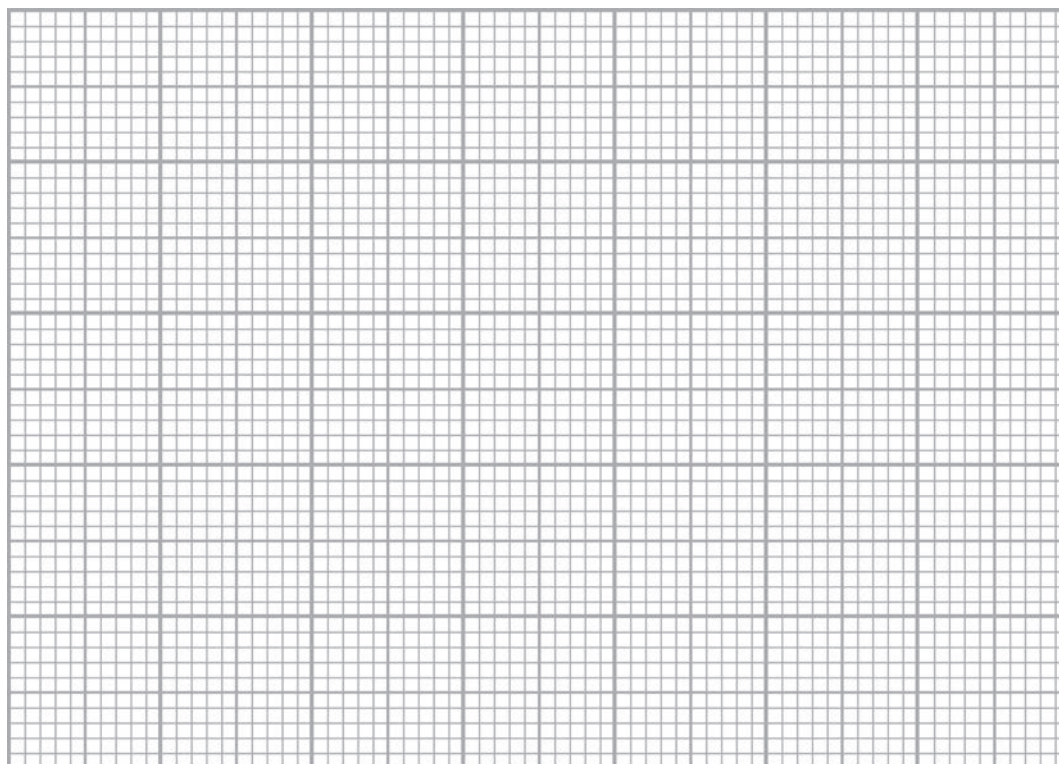
Key

- |                        |                   |
|------------------------|-------------------|
| Use                    | Building age      |
| PB = public buildings  | i = 19th century  |
| SO = shops and offices | ii = 1901–39      |
| OS = open space        | iii = 1945–99     |
| E = entertainment      | iv = 21st century |
| R = residential        |                   |
| T = transport          |                   |

**Figure 10b**

(i) Draw a labelled graph below (Figure 10c) to present the data for building height at sites 2, 4, 6, 8 and 10.

(4)



**Figure 10c**





(iv) Comment on other information you might need in an investigation about changes in buildings and land use in an urban area.

(4)

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**(Total for Question 10 = 25 marks)**

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**TOTAL FOR SECTION C = 50 MARKS**



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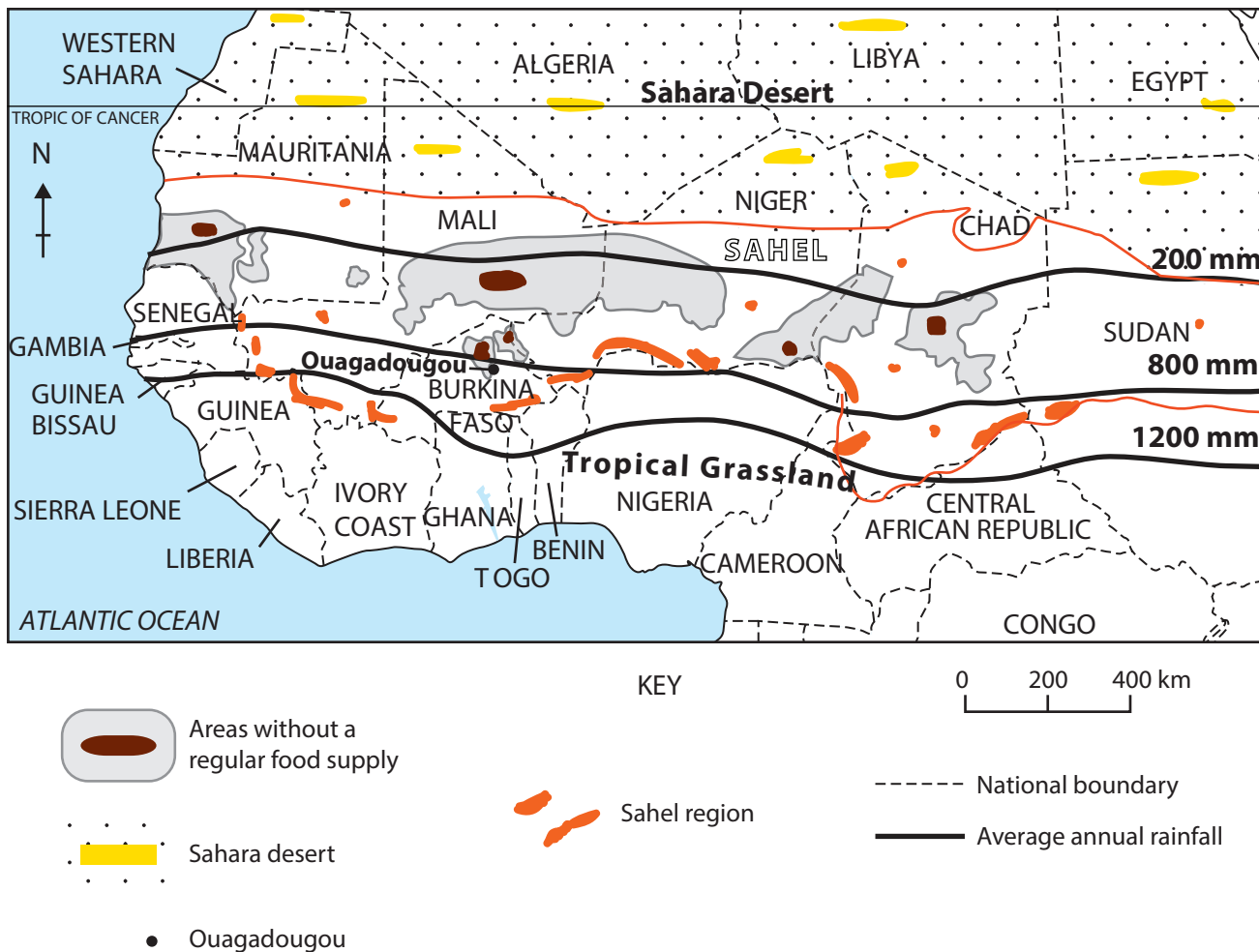
**SECTION D – GLOBAL ISSUES**

**Answer ONE question only from this section.**

**If you answer Question 11 put a cross in the box .**

**11 Fragile environments**

(a) Study Figure 11a which shows an area of Africa including the Sahel region.



**Figure 11a**

(i) Which **one** of the following best describes the location of the Sahel region?

Put a cross in the correct box.

(1)

- A** in the centre of the Sahara desert
- B** at the southern edge of the Sahara desert
- C** north of the Tropic of Cancer
- D** south of Burkina Faso





(ii) Name **one** country in the Sahel that contains areas without a regular food supply.

(1)

(iii) What happens to the average annual rainfall in a northerly direction from the city of Ouagadougou in Burkina Faso?

(1)

(iv) Suggest how this trend in rainfall is likely to affect food production.

(2)



P 4 4 3 1 4 A 0 5 7 7 2

(b) (i) What is **soil erosion**?

(2)

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(ii) Outline **two** causes of soil erosion.

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(iii) Describe how soil erosion is being managed in areas affected by desertification.

Reference to a named area may help your answer.

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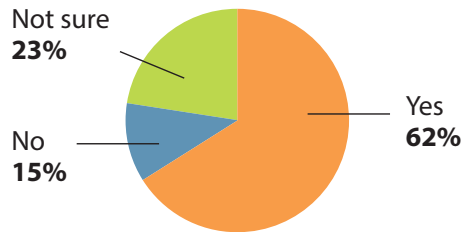
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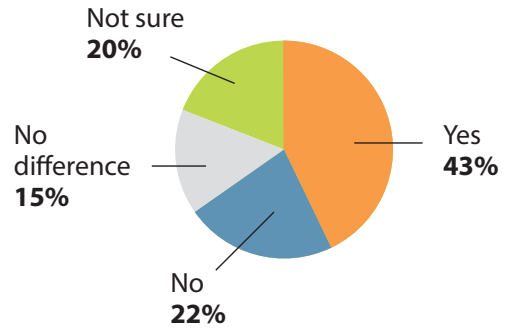


(c) Study Figure 11b which shows the results of a public opinion survey about global warming, taken in 2012.

**Do you think the world is becoming warmer?**



**Do you think the world is becoming warmer due to human activity?**



**Figure 11b**

Explain why opinion about global warming is divided.

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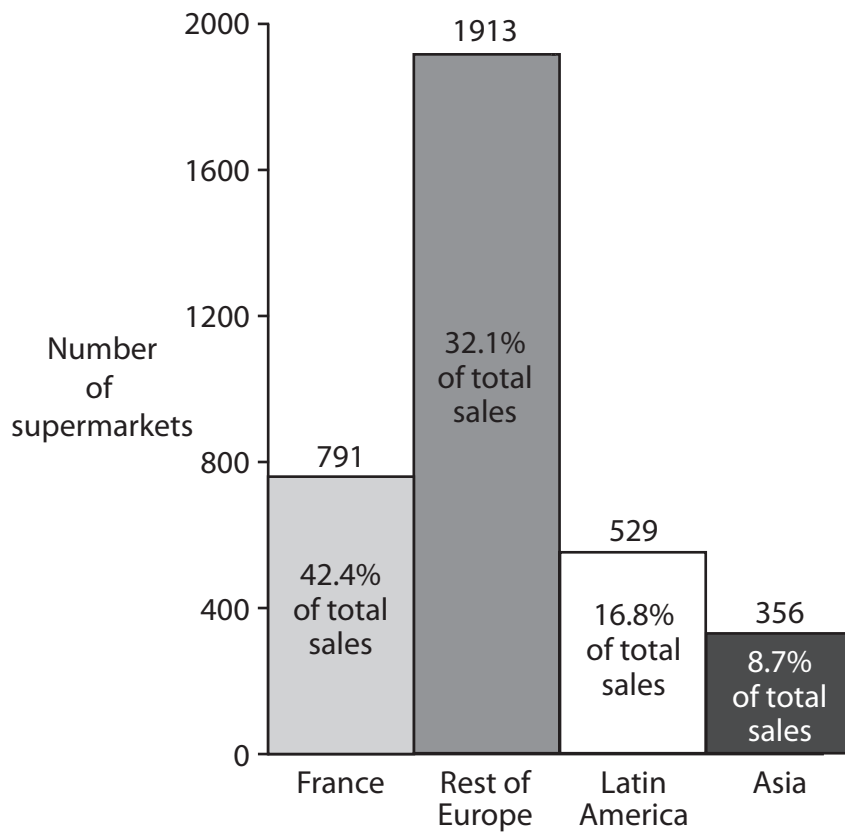
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If you answer Question 12 put a cross in the box .

## 12 Globalisation and migration

(a) Study Figure 12a which shows information about Carrefour, the French supermarket company.



**Figure 12a**

(i) Which term best describes global companies such as Carrefour?

Put a cross in the correct box.

(1)

- A** high street store
- B** production chain
- C** TNC (transnational corporation)
- D** primary producer



(ii) Name the region in which Carrefour has:

(2)

1. most stores

.....

2. highest sales

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(iii) Suggest **one** reason why Carrefour's recent growth has taken place mainly in Latin America and Asia.

(2)

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P 4 4 3 1 4 A 0 6 3 7 2

(b) (i) What is the **global shift** in manufacturing?

(2)

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(ii) Outline **two** reasons for the global shift in manufacturing.

(4)

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(iii) Describe **one** benefit and **one** cost to countries in which TNCs set up new businesses.

(4)

Benefit

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Cost

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(d) Discuss attempts being made to make tourism more sustainable.

Reference to examples may help your answer.

(9)

Area with horizontal dotted lines for writing the answer.

**(Total for Question 12 = 30 marks)**



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P 4 4 3 1 4 A 0 6 7 7 2

If you answer Question 13 put a cross in the box  .

**13 Development and human welfare**

(a) Study Figure 13a which shows Gross Domestic Product (GDP) per person and percentage change in GDP for the countries of South America in 2009.



**Figure 13a**

(i) Which country had the highest GDP per person?

Put a cross in the correct box.

(1)

- A** Argentina
- B** Brazil
- C** Colombia
- D** Paraguay



(ii) Which country showed the largest percentage increase in GDP? (1)



(iii) Which of the BRICS is shown in Figure 13a? (1)



(iv) Identify **one** piece of evidence in Figure 13a that there is a development gap within South America. (2)



(b) **Debt relief** is a strategy for reducing disparities in development between countries.

(i) How does debt relief work?

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(ii) Outline **two** other strategies for reducing disparities in development.

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(iii) Describe how the Human Development Index (HDI) is calculated.

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