

Write your name here	
Surname	Other names
Pearson Edexcel Certificate Pearson Edexcel International GCSE	Centre Number Candidate Number
Geography Unit: KGE0/4GE0 Paper: 01	
Tuesday 13 May 2014 – Afternoon Time: 3 hours	Paper Reference KGE0/01 4GE0/01
You must have: Ruler, pencil and pen	Total Marks

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 ►

P44314A

©2014 Pearson Education Ltd.

1/2/5/5/1/1/1



PEARSON

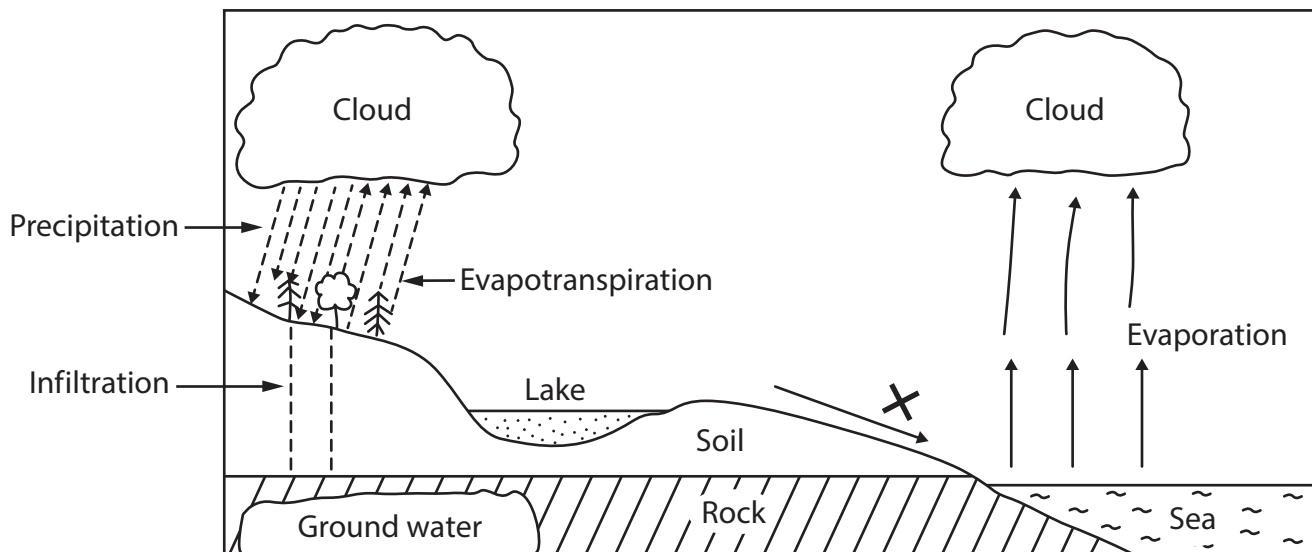
SECTION A – THE NATURAL ENVIRONMENT**Answer TWO questions only from this section.**

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)



P 4 4 3 1 4 A 0 3 7 2

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

(2)

.....

.....

.....

.....

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

(4)

1

.....

.....

.....

2

.....

.....

.....



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

Diagrams may help your answer.

(6)

1

.....

.....

.....

.....

.....

.....

.....

.....

2

.....

.....

.....

.....

.....

.....

.....

.....



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

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

(9)

(Total for Question 1 = 25 marks)



BLANK PAGE



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.

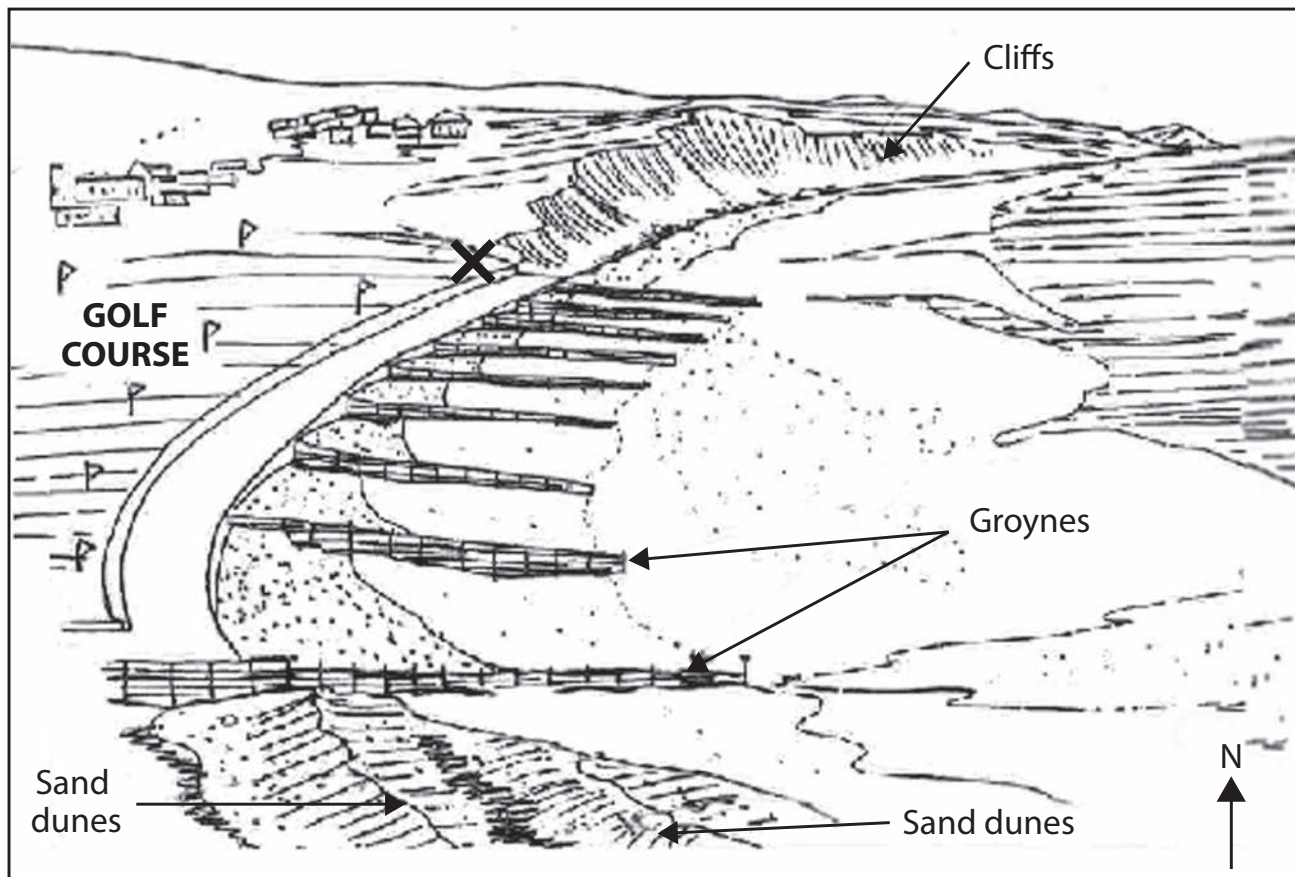


Figure 2

(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)

.....

.....

.....

.....



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

(2)

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

(4)

1

2



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

Diagrams may help your answer.

(6)

Landform 1

.....

.....

.....

.....

.....

Landform 2

.....

.....

.....

.....

.....



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

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

(9)

(Total for Question 2 = 25 marks)



BLANK PAGE



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.

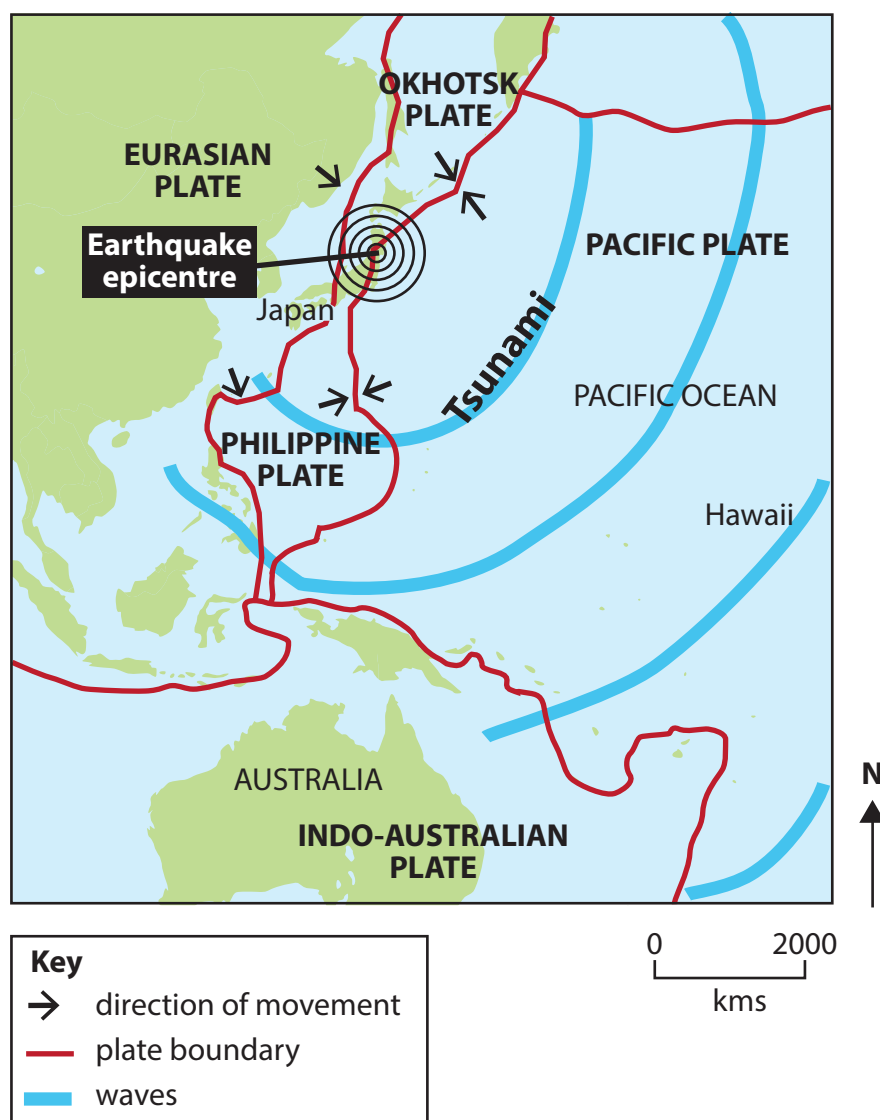


Figure 3

- (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)



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

(2)

.....

.....

.....

.....

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

(4)

1

.....

.....

.....

2

.....

.....

.....



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

Diagrams may help your answer.

(6)

1

.....

.....

.....

.....

.....

.....

.....

.....

2

.....

.....

.....

.....

.....

.....

.....

.....



- (d) Discuss why a country's level of economic development may affect the impact of a natural hazard event.

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

(9)

(Total for Question 3 = 25 marks)

TOTAL FOR SECTION A = 50 MARKS



BLANK PAGE



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

Disadvantage

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

(2)

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

(4)

1

2



Reference to named countries may help your answer.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

(c) Discuss why one named de-industrialised area has become a focus for redevelopment.

(9)

Name of area:

(Total for Question 4 = 25 marks)



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)



(9)

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

26



BLANK PAGE



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



- (iii) What is it called when a government or NGO (non-government organisation) provides free building materials for residents to improve their squatter settlement?

Put a cross in the correct box.

(1)

- ☐ **A** rebranding
- ☐ **B** self-help
- ☐ **C** suburbanisation
- ☐ **D** social deprivation

- (b) (i) What is meant by the term **urbanisation**?

(2)

.....

.....

.....

.....

- (ii) Outline **two** factors that affect the rate of urbanisation.

(4)

1

.....

.....

.....

.....

2

.....

.....

.....

.....



Reference to examples may help your answer.

[illegible]

(c) Discuss the distribution of different types of land use in **one** named city.

(9)

Name of city:

(Total for Question 6 = 25 marks)

TOTAL FOR SECTION B = 50 MARKS



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)

.....

.....

.....

.....

.....

.....

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

(4)

1

.....

.....

.....

.....

.....

2

.....

.....

.....

.....



(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 ²)	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)

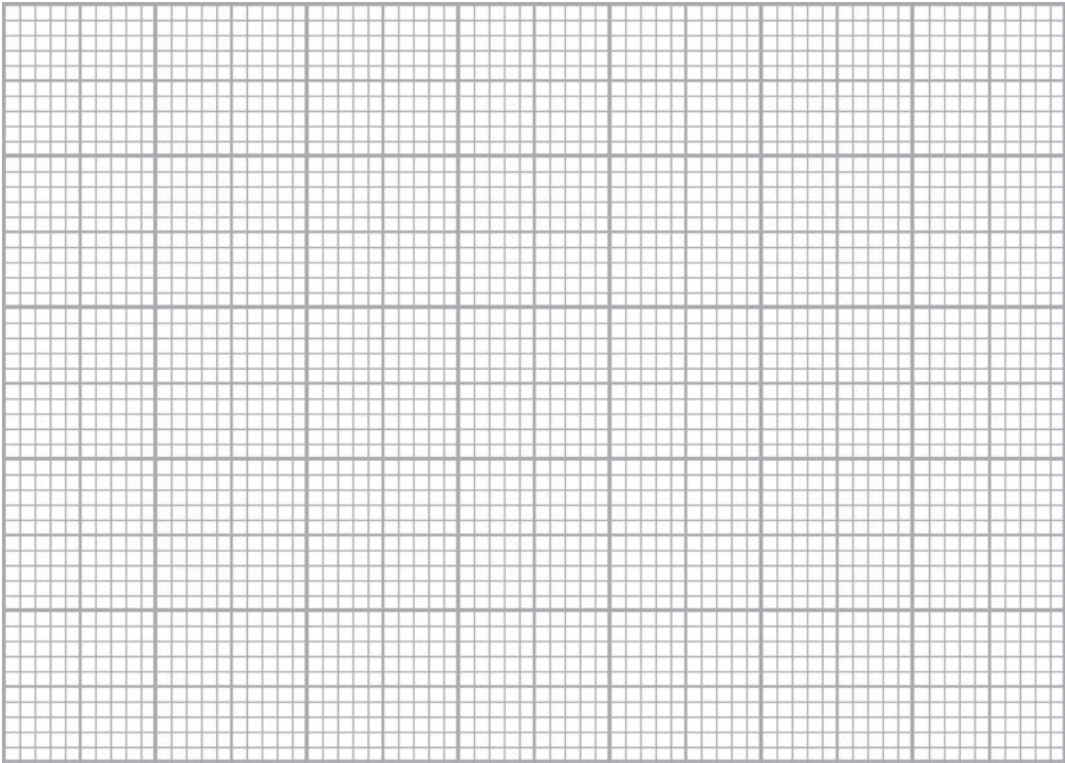


Figure 7c



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

(3)

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

(6)



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

(4)

(Total for Question 7 = 25 marks)



BLANK PAGE



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.

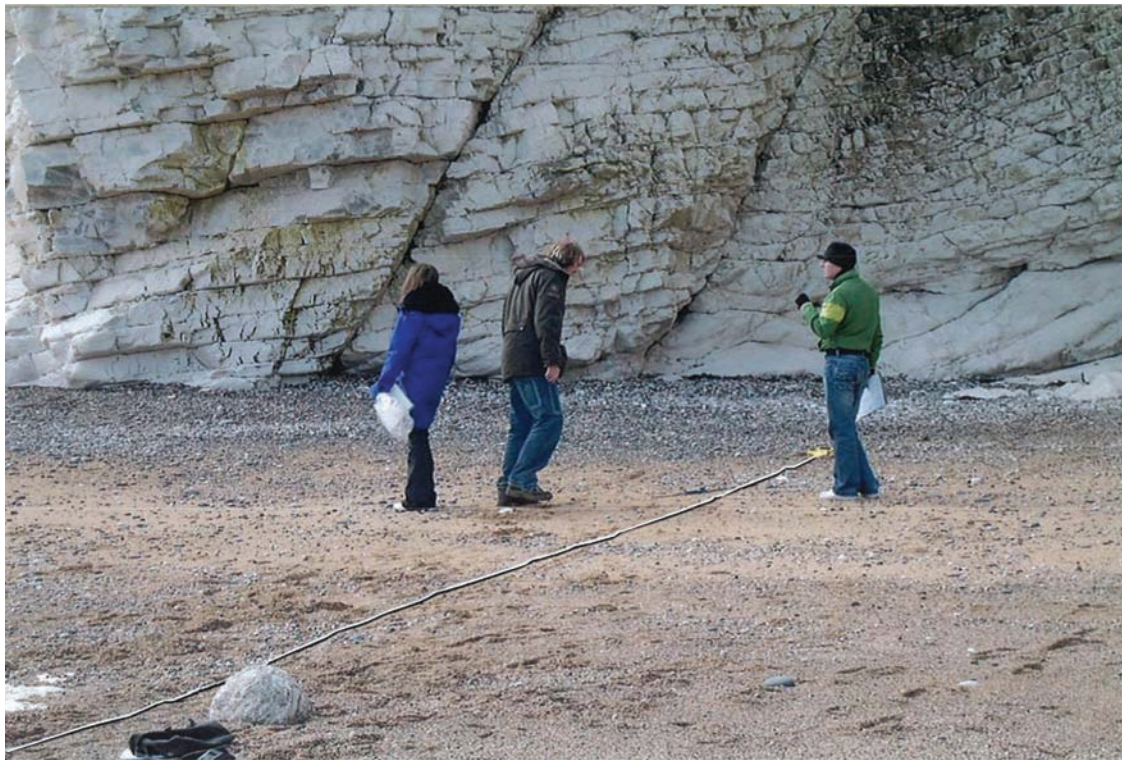


Figure 8a

(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)

.....

.....

.....

.....

.....

.....

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

(4)

1

.....

.....

.....

.....

.....

2

.....

.....

.....

.....



(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)

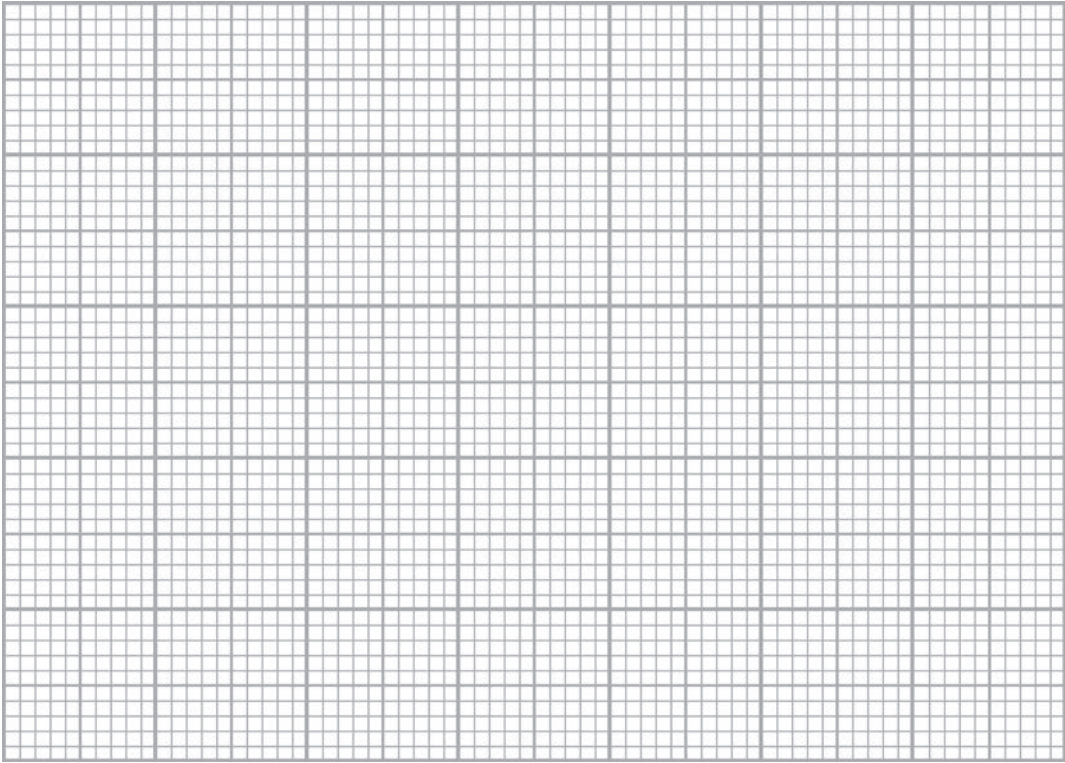


Figure 8c



(3)

(6)



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

(4)

(Total for Question 8 = 25 marks)



BLANK PAGE



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.

QUESTIONNAIRE

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)



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

(3)

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

(4)

1

2



(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	
Age	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)

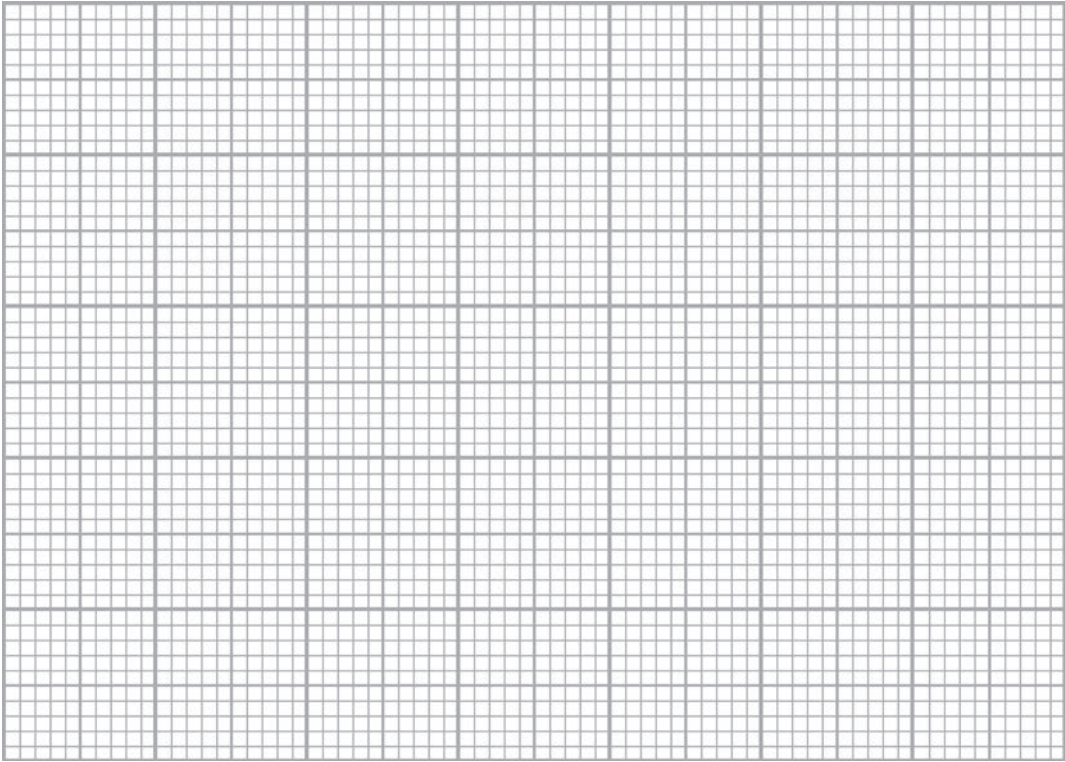


Figure 9c



(ii) Justify your choice of data presentation technique in Figure 9c.

(3)

(iii) What conclusions about the future use of energy sources can be reached from analysing the questionnaire responses in Figure 9b?

(6)



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

(4)

(Total for Question 9 = 25 marks)



BLANK PAGE



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.

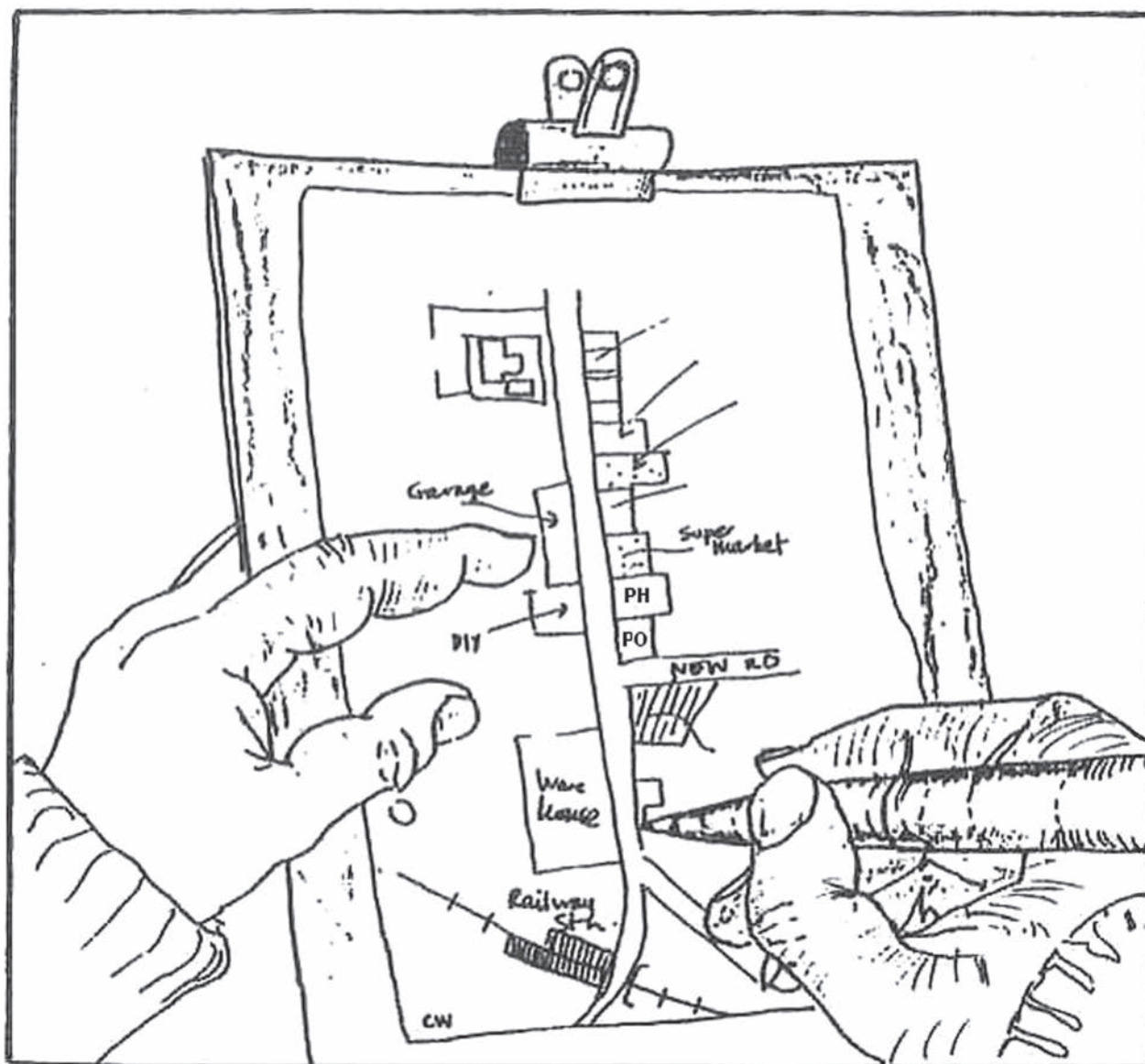


Figure 10a

- (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)

.....

.....

.....

.....

.....

.....

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

(4)

1

.....

.....

.....

.....

.....

2

.....

.....

.....

.....



(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

PB = public buildings

SO = shops and offices

OS = open space

E = entertainment

R = residential

T = transport
- Building age

i = 19th century

ii = 1901–39

iii = 1945–99

iv = 21st century

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)

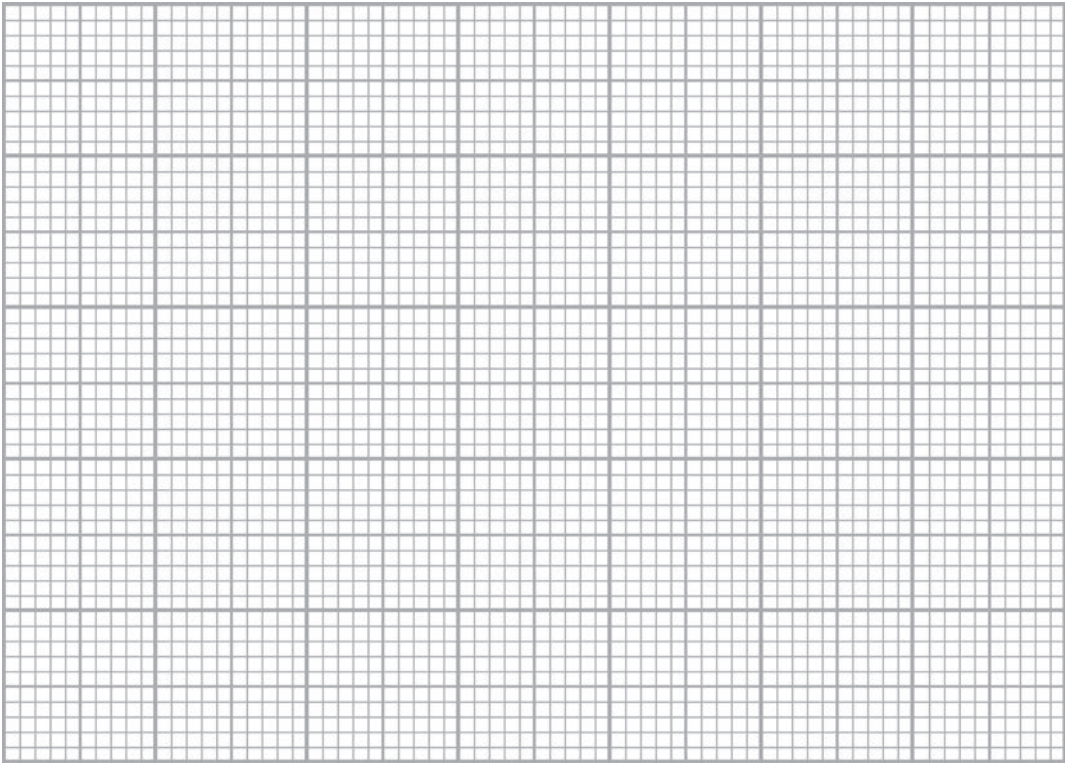


Figure 10c



(ii) Justify your choice of data presentation technique in Figure 10c.

(3)

(iii) What conclusions can be reached about building and land use changes along the transect from an analysis of the data in Figure 10b?

(6)



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

(4)

(Total for Question 10 = 25 marks)

TOTAL FOR SECTION C = 50 MARKS



BLANK PAGE



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.

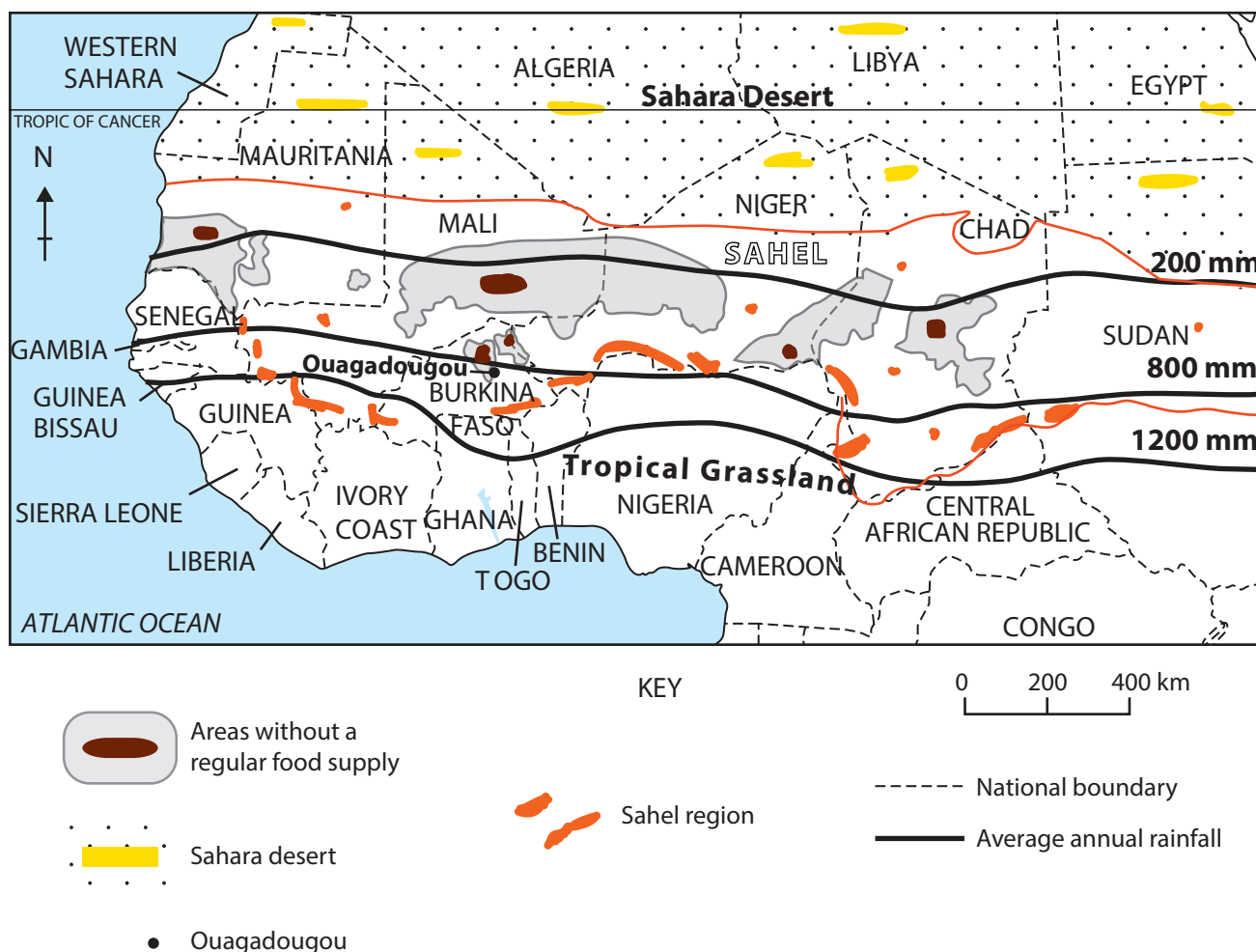


Figure 11a

(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)



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

(2)

.....

.....

.....

.....

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

(4)

1

.....

.....

.....

.....

2

.....

.....

.....

.....

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

Reference to a named area may help your answer.

(4)

.....

.....

.....

.....

.....

.....

.....

.....

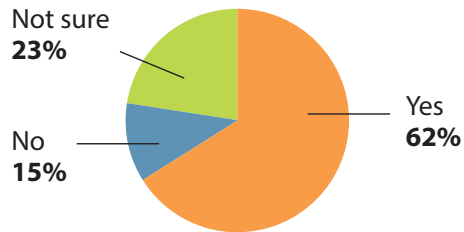
.....

.....



- (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?

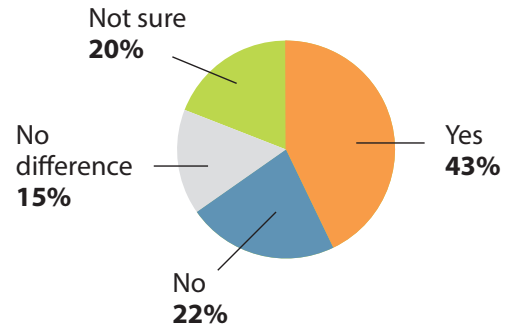


Figure 11b

Explain why opinion about global warming is divided.

(6)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....



(d) Discuss how a named area of threatened tropical rainforest is now being managed more sustainably.

(9)

Name of area:

(Total for Question 11 = 30 marks)



BLANK PAGE



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.

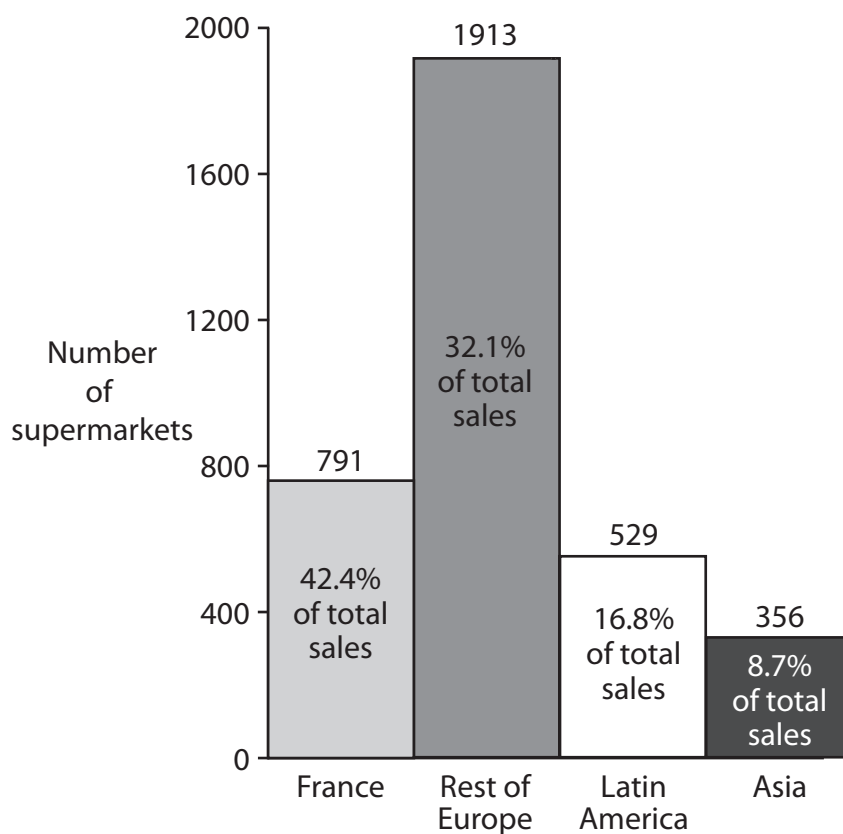


Figure 12a

- (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

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

(2)



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

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

(2)

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

(4)

1

2

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

(4)

Benefit

Cost



- (c) Study Figure 12b which gives information about migration into Australia (population 22 million) in 2010.

Main source of migrants entitled to settle	Main source of refugees seeking asylum
25800 from New Zealand	2700 from Afghanistan
14700 from China	890 from Iran
11000 from UK	640 from Sri Lanka
Total (all countries) 127000	Total (all countries) 8500

Figure 12b

Explain why countries, such as Australia, need to manage international migration flows.

(6)

[illegible]

Reference to examples may help your answer.

66



BLANK PAGE



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?

(2)

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

(4)

1

2

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

(4)



POPULATION (millions)

Country	1950	2010	2050 (projected)
India	370	1200	1700
China	550	1300	1300
Nigeria	37	158	390
Indonesia	75	240	293
Ethiopia	18	83	145

Explain the consequences of high rates of population growth for the quality of life within a country.

[illegible]

(9)

[illegible]

TOTAL FOR SECTION D = 30 MARKS
TOTAL FOR PAPER = 180 MARKS