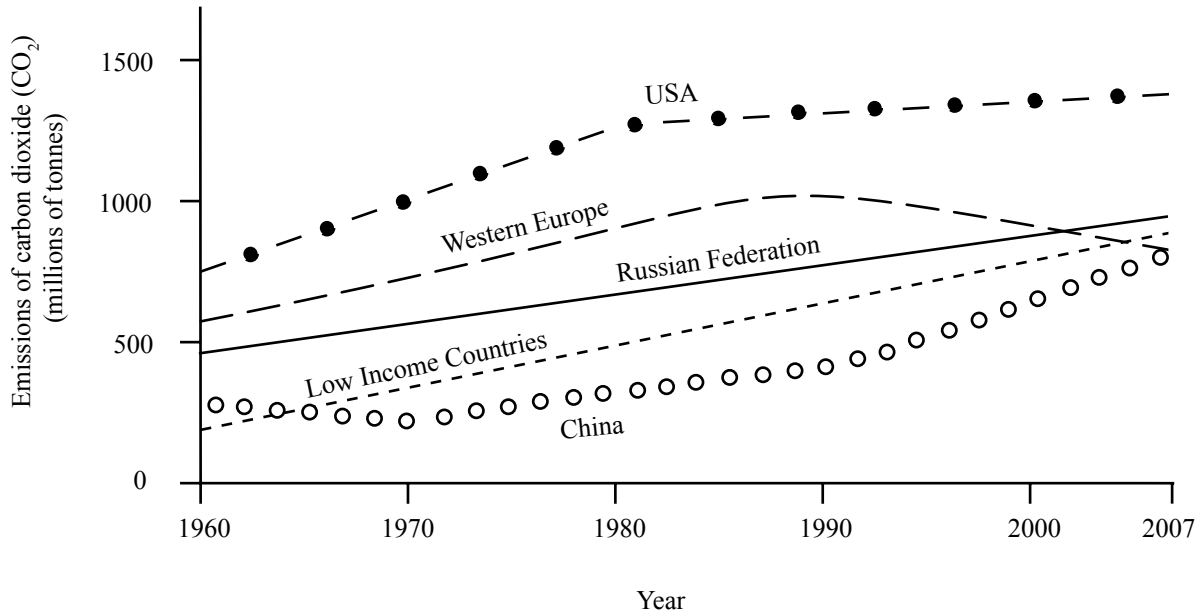




**Answer FOUR questions only.**

**If you answer Question 1 put a cross in this box .**

1. (a) Study Figure 1(a) which shows the trends in carbon dioxide (CO<sub>2</sub>) emissions in five areas.



**Figure 1(a)**

(i) State:

1. one area where there has been a continuous rise in carbon dioxide emissions

.....

2. the level of emissions in China in the year 2000.

.....

**(2)**









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

2. (a) Study Figure 2(a) which shows a map of the world.

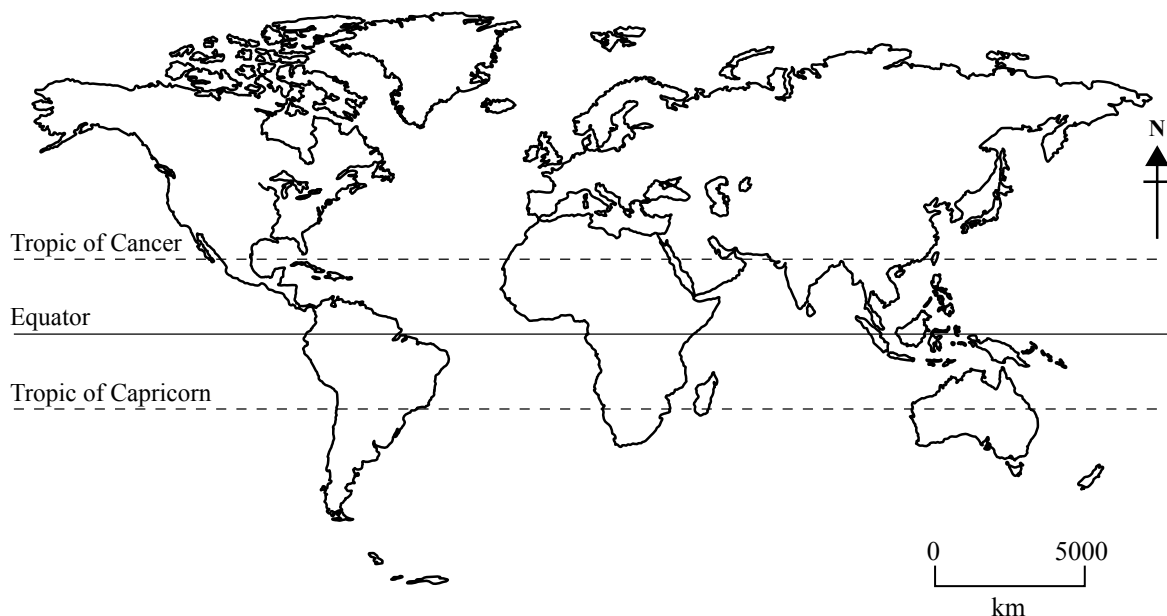


Figure 2(a)

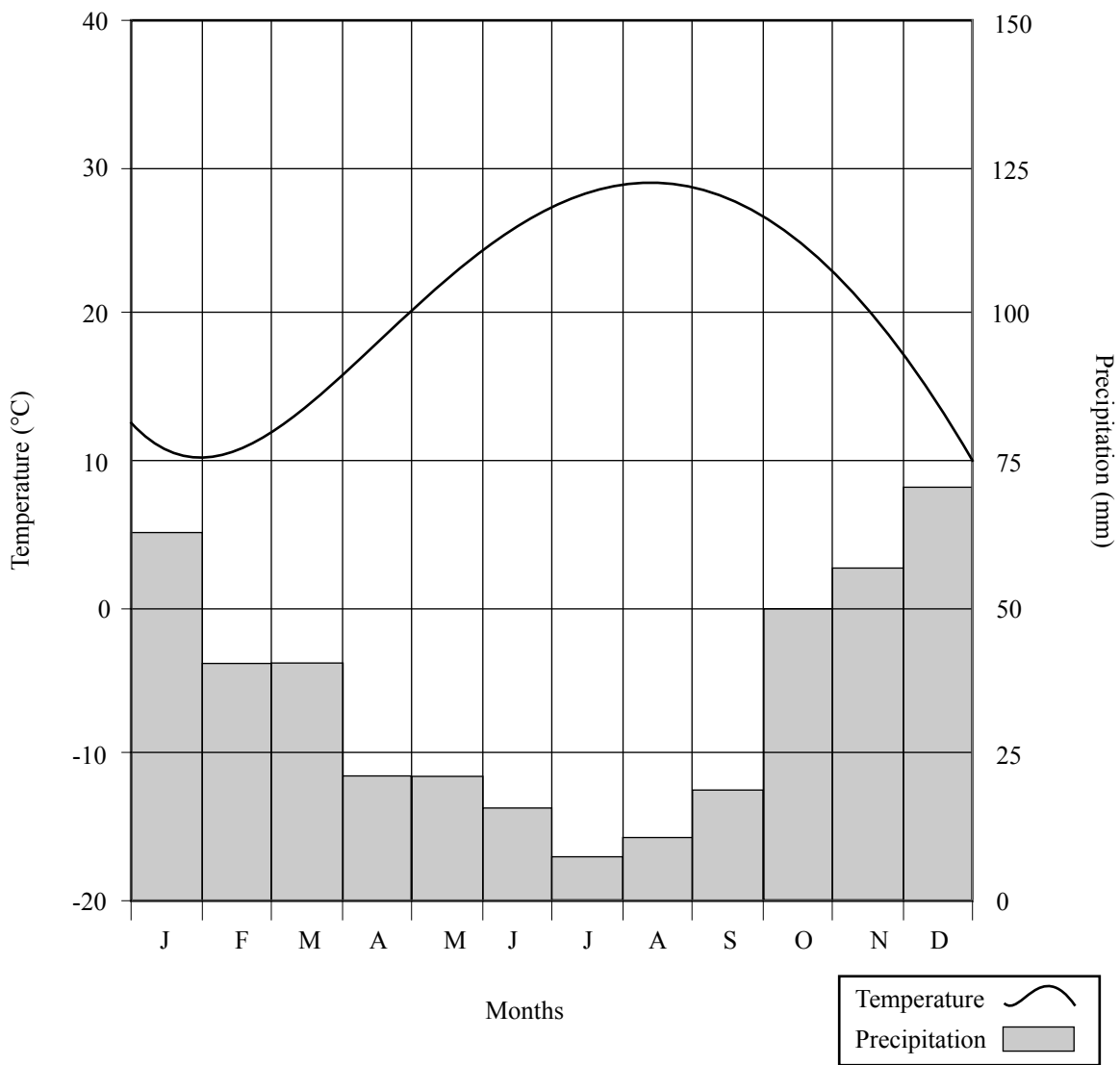
On Figure 2(a) mark **one** area where each of the following is found:

- A a large annual range of temperature
- B a frequent occurrence of tropical revolving storms
- C a Mediterranean climate in the Southern Hemisphere
- D a tropical area where the annual precipitation is less than 250 mm.

(4)



(b) Study Figure 2(b) which shows a Mediterranean climate.



**Figure 2(b)**

(i) State the annual range of temperature.

..... (1)

(ii) Describe the annual distribution of precipitation.

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 .....  
 .....  
 .....  
 ..... (2)





(iii) Explain this distribution of precipitation.

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**(4)**

(iv) More than 10% of the area with the climate shown in Figure 2(b) is now affected by desertification. Suggest reasons for this.

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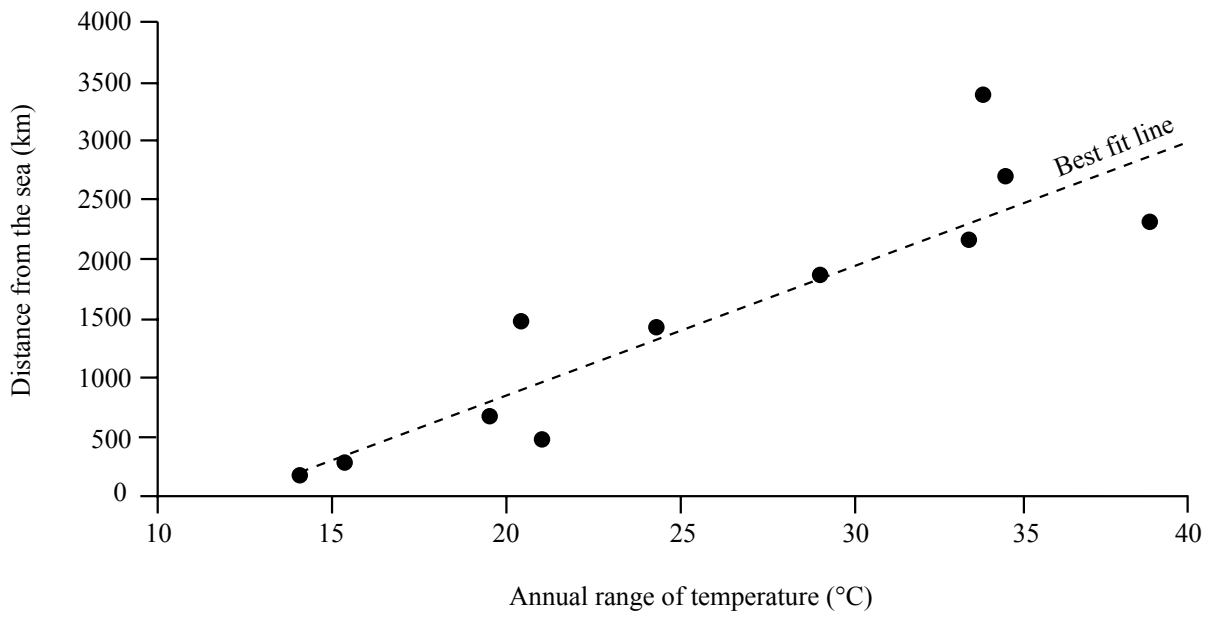
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**(5)**



(c) Study Figure 2(c) which shows the relationship between increasing distance from the sea and annual range of temperature.



The best fit line helps to show the relationship between distance and temperature

**Figure 2(c)**





If you answer Question 3 put a cross in this box ☒ .

3. (a) Study Figure 3(a) which shows four components of a typical soil.

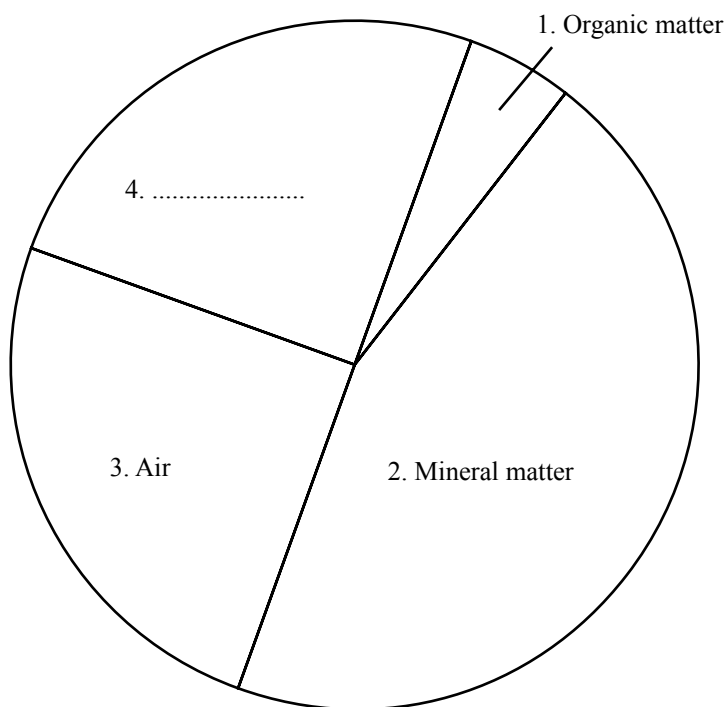


Figure 3(a)

(i) State which named component:

1. is the smallest

.....

2. forms about 25% of the total.

.....

(2)

(ii) Complete the pie chart by labelling component 4.

(1)



(iii) Give **two** sources of organic matter found in soils.

1 .....

.....

2 .....

.....

**(2)**

(iv) Suggest how the proportions of the four components in a peat soil might differ from those shown in Figure 3(a). Give reasons for the differences.

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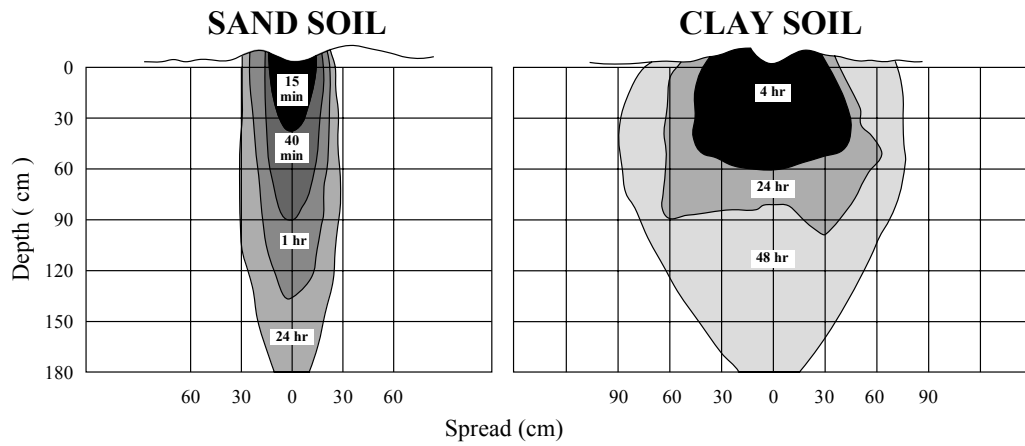
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**(5)**



(b) Study Figure 3(b) which shows the movement of water through a sand soil and a clay soil.



**Figure 3(b)**

(i) Compare the movement of water through the two soils.

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**(3)**

(ii) Explain the differences in the movement of water.

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**(3)**





If you answer Question 4 put a cross in this box .

4. (a) Study Figure 4(a) which shows two types of plate margin.

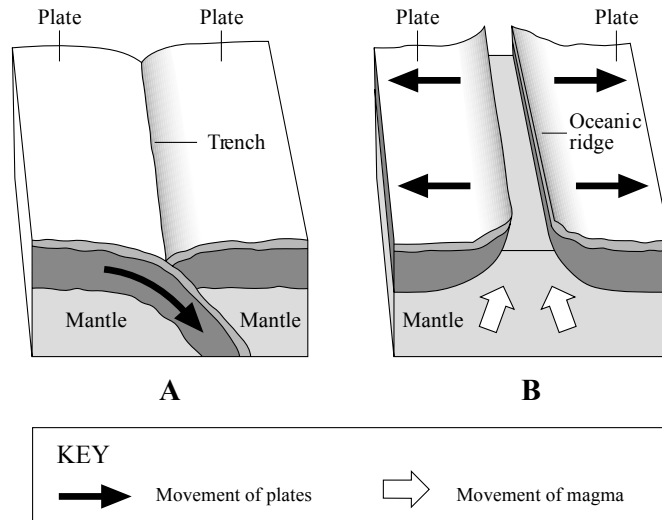


Figure 4(a)

(i) Which of the two margins is constructive? Put a cross (☒) in the correct box.

A

B

(1)

(ii) What term is used to describe the other margin shown?

..... (1)

(iii) For each margin, describe the movement of the plates and the likely effects.

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(4)





(b) Study Figure 4(b) which shows the world distribution of earthquakes where more than 10 000 people have died.

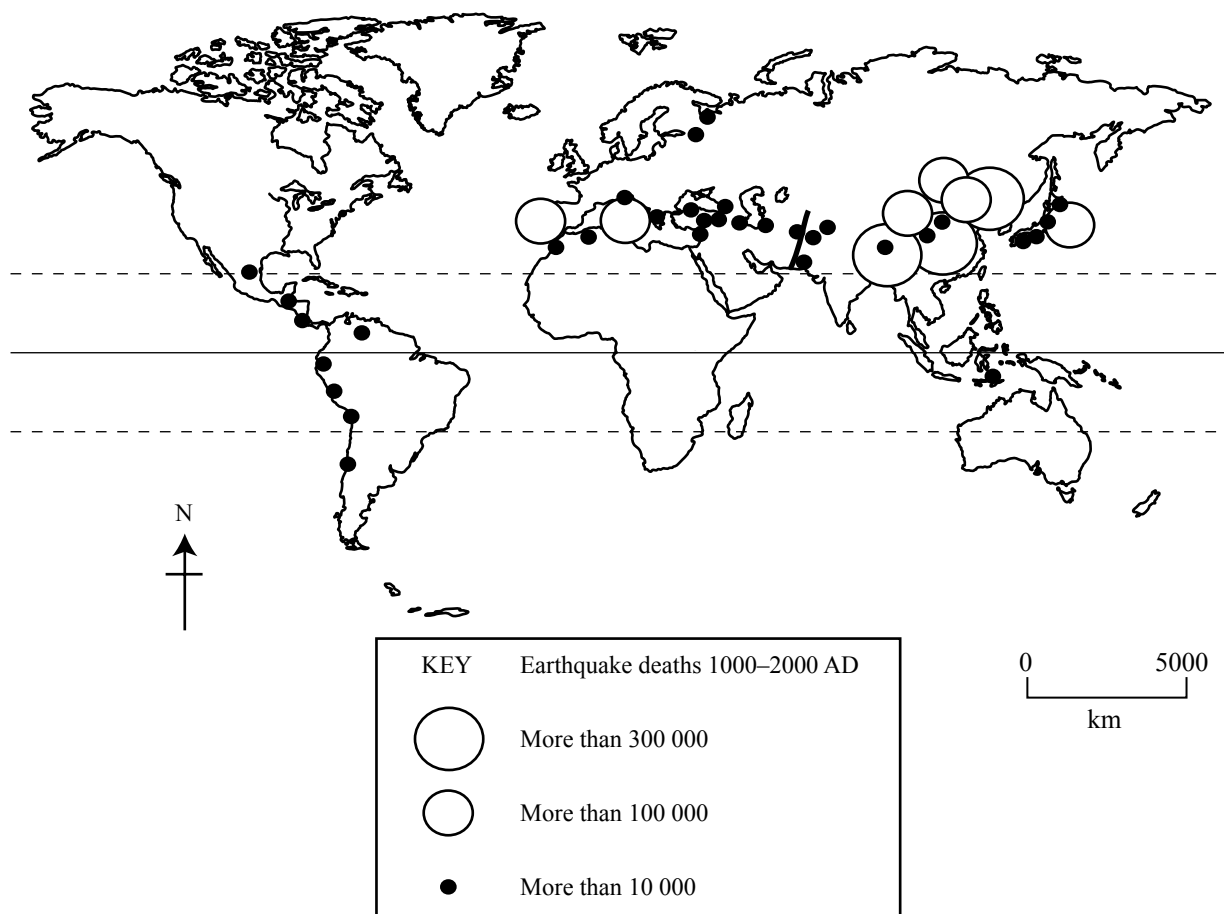


Figure 4(b)

(i) Describe this distribution.

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(4)



(ii) Explain why the number of deaths from earthquakes is higher in some parts of the world than in others.

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**(6)**



(c) In spite of knowing the risks people continue to live in areas which experience earthquakes and volcanoes.

With reference to any named areas, suggest why.

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(9) Q4

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(Total 25 marks)



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

5. (a) Study Figure 5(a) which shows part of the hydrological cycle.

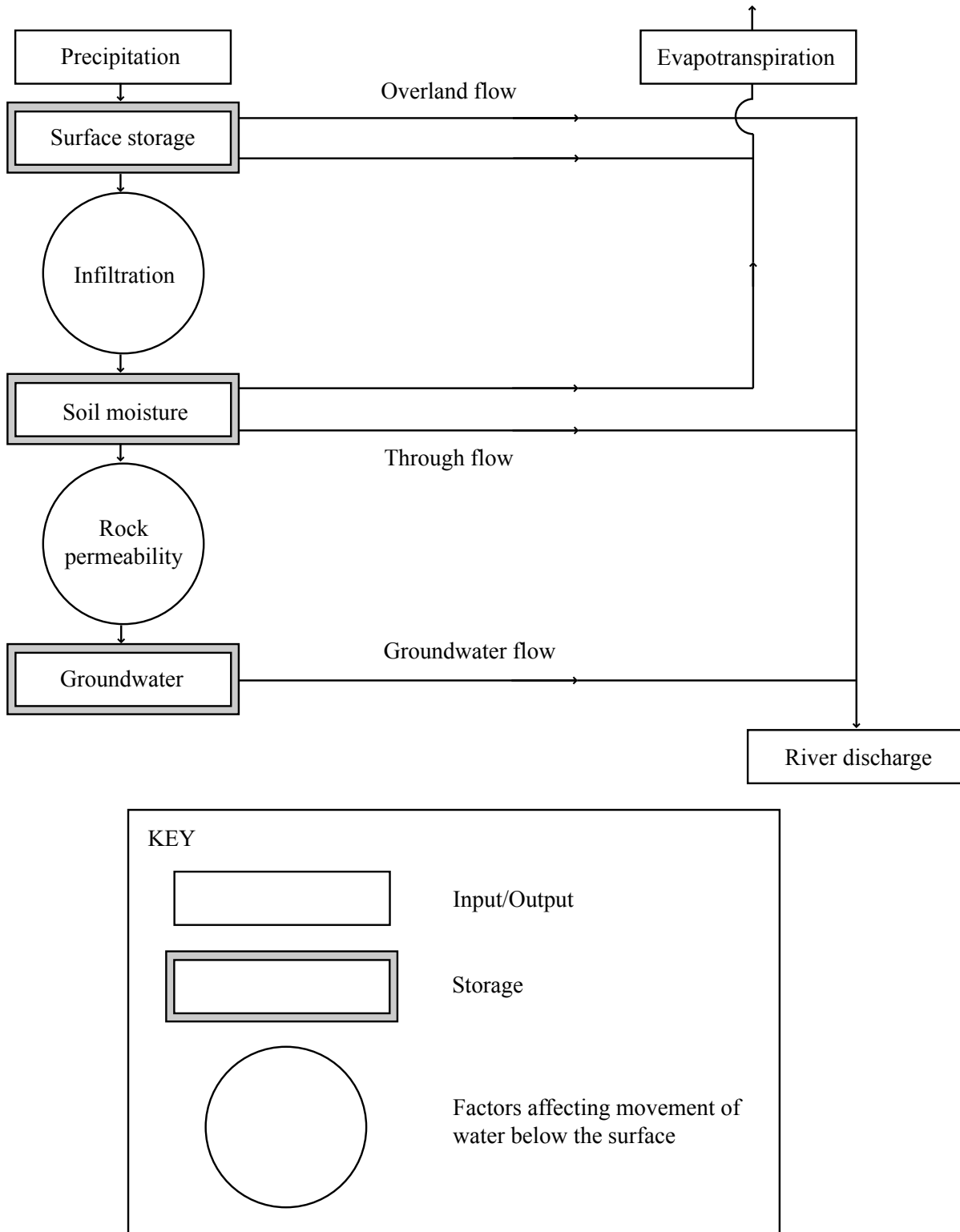


Figure 5(a)



(i) State **one** input.

..... (1)

(ii) State **one** output.

..... (1)

(iii) What is meant by **river discharge**?

.....  
.....  
.....  
.....  
..... (2)

(iv) Which is the quickest route for precipitation to reach the river?

.....  
.....  
..... (1)



(v) Describe how the movement of water below the surface is affected by:

1. infiltration

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2. rock permeability.

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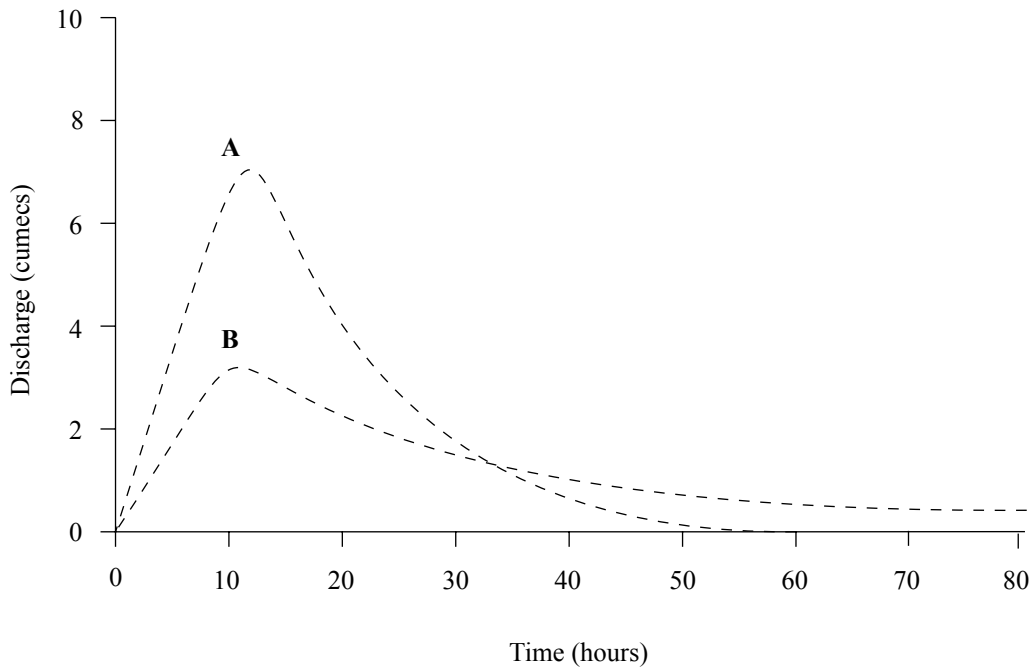
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**(4)**



(b) Study Figure 5(b) which shows the hydrographs for two rivers (A and B) following the same storm.



**Figure 5(b)**

(i) Compare the discharges of the two rivers.

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**(3)**



(ii) Suggest reasons for the differences in the discharges.

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**(4)**

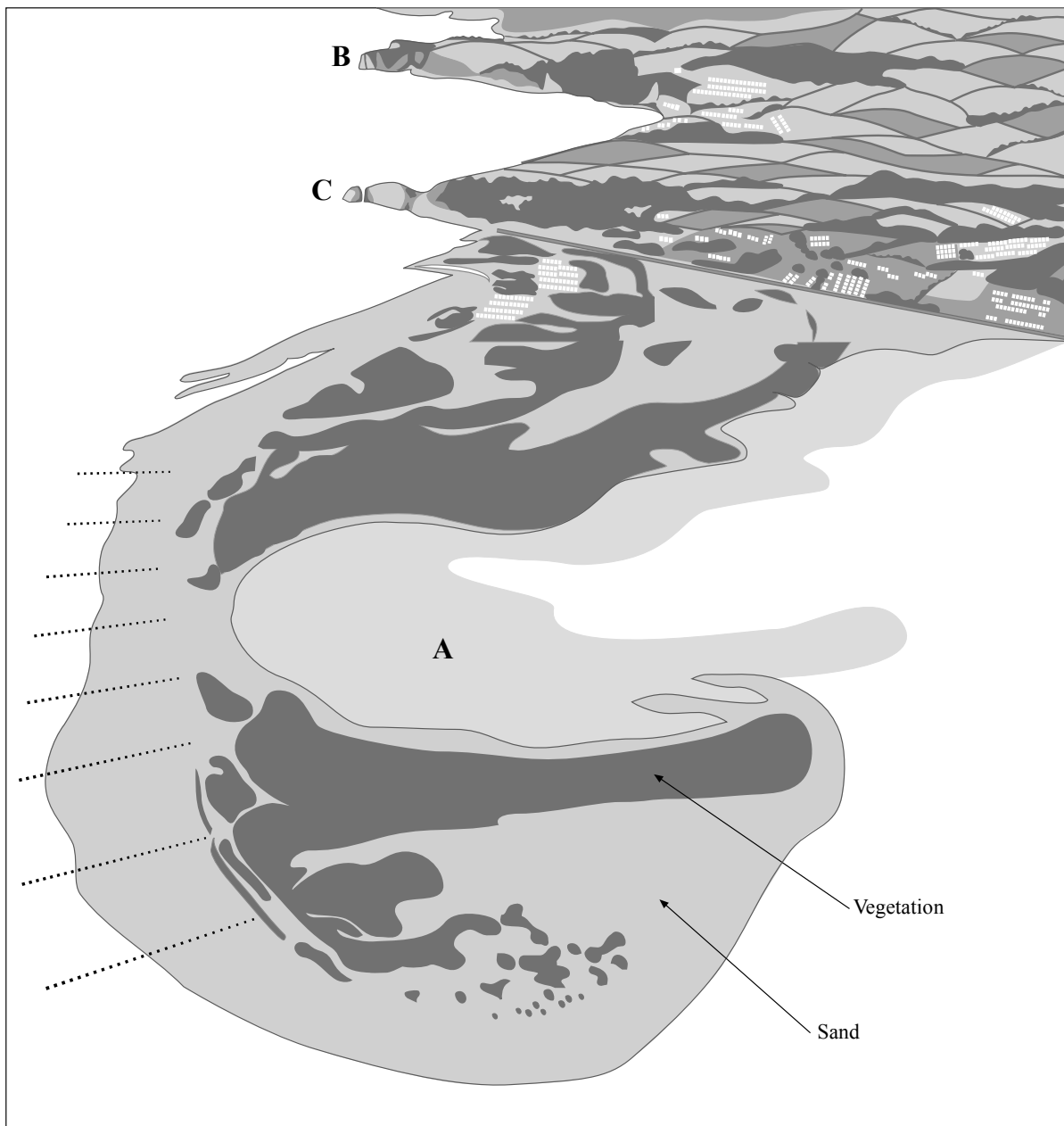






If you answer Question 6 put a cross in this box ☒ .

6. (a) Study Figure 6 which shows a coastline spit.



**KEY**

..... Groyne


 Settlement

Figure 6



(i) Describe the shape of the spit.

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**(2)**

(ii) Explain how the spit was formed.

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**(4)**



(iii) What is the purpose of the groyne?

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**(1)**

(iv) Give **two** reasons why saltmarsh is found at **A**.

1 .....  
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2 .....  
.....  
**(2)**

(v) Explain why there is very little settlement on the spit.

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**(3)**



(vi) How does the coastline between **B** and **C** differ from the spit?

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**(4)**



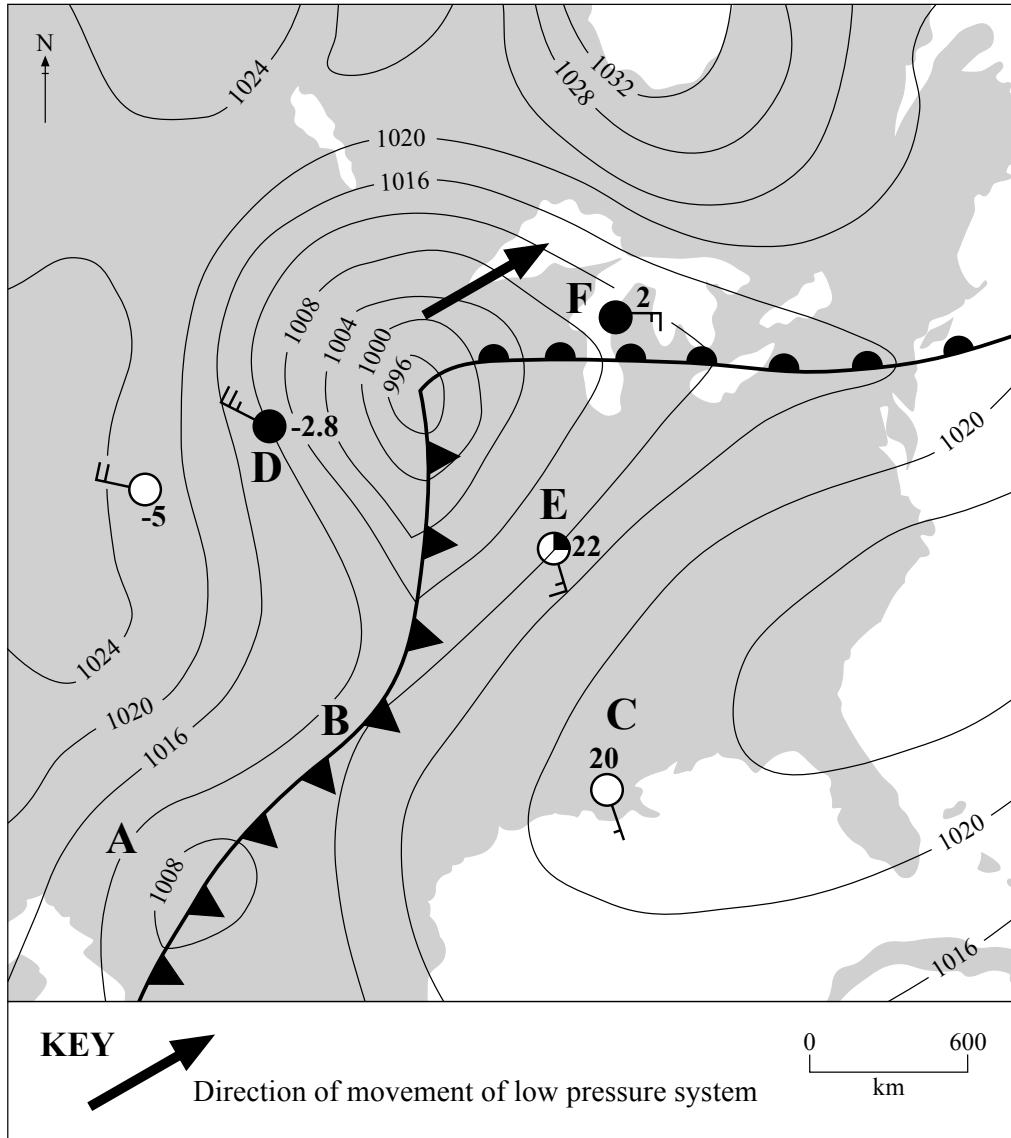


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If you answer Question 7 put a cross in this box .

7. (a) Study Figure 7(a) which shows a low pressure system over part of North America.



Wind speed	Knots	Cloud amount	Oktas
	Calm		0
	1-2		1/8
	3-7		2/8
	8-12		3/8
	13-17		4/8
	18-22		5/8
	23-27		6/8
	For each additional half-feather add 5 knots		7/8
			8/8
			Sky obscured (eg by fog)
	20 Temperature (°C)		996 Isobar with pressure in millibars drawn at every four millibars

Figure 7(a)





(i) State the atmospheric pressure at **A**.

..... (1)

(ii) State the type of front at **B**.

..... (1)

(iii) 1. State the difference in temperature between **D** and **E**.

..... (1)

2. Outline the reason for this difference.

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..... (3)



(iv) 1. State the difference in wind speed between **C** and **D**.

..... **(1)**

2. Outline the reason for this difference.

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..... **(3)**

(v) In which direction is the low pressure system moving?

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..... **(1)**



(vi) Describe how the weather at **F** will change as the system moves.

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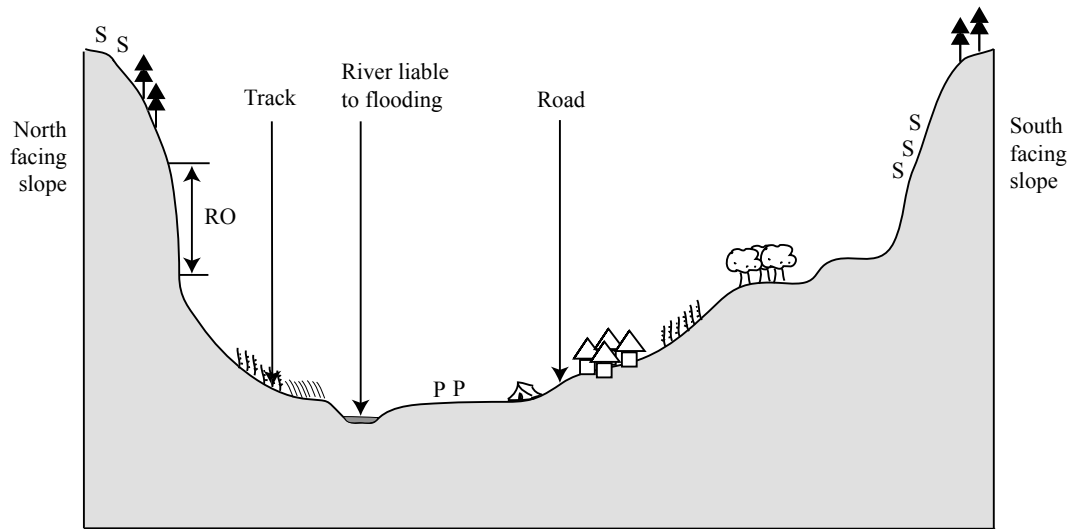
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**(5)**



(b) Study Figure 7(b) which shows a cross section of a steep sided valley in the Northern Hemisphere.



KEY

- |  |                  |    |                    |
|--|------------------|----|--------------------|
|  | Village          |    | Camp site          |
|  | Coniferous trees | S  | Sheep rearing      |
|  | Orchard          | P  | Pasture for cattle |
|  | Cereal crops     | RO | Rocky outcrop      |
|  | Hay              |    |                    |

Figure 7(b)





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

8. (a) Study Figure 8 which shows a landform in an area of sedimentary rocks.

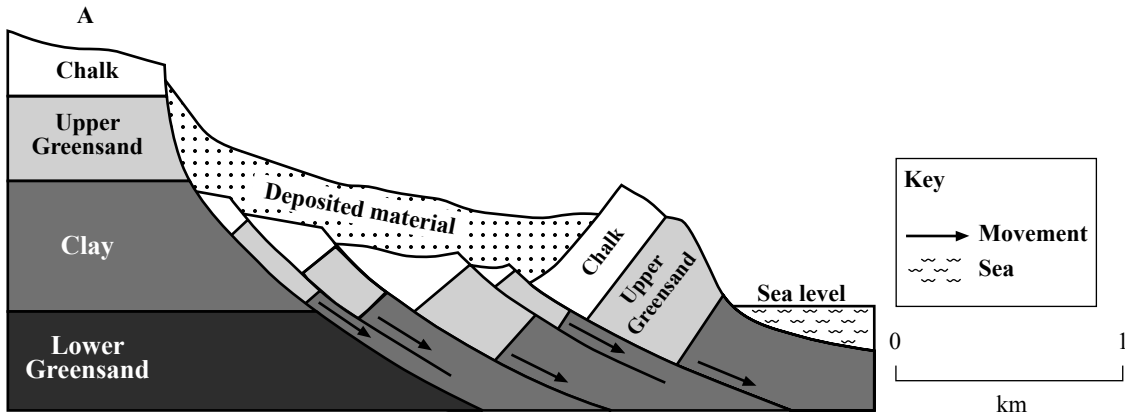


Figure 8

(i) State **two** characteristics of sedimentary rock.

1 .....  
 ..... (1)

2 .....  
 ..... (1)

(ii) Describe the landform shown.

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 .....  
 .....  
 ..... (4)



(iii) Explain the formation of the landform.

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**(3)**

(iv) Describe and explain the type of farming likely to be found at A.

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**(6)**



(b) (i) Name **one** area of Carboniferous Limestone.

..... (1)

(ii) Describe and explain the characteristics of the physical landscape associated with the named area of Carboniferous Limestone.

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(9)

(Total 25 marks)

Q8

**TOTAL FOR PAPER: 100 MARKS**

**END**

