

FORM 4 **GEOGRAPHY (OPTION)** **TIME: 1h 30min**

For Examiner's use only.

Question No.	1	2	3	4	5	6	7	8	9	Written Exam	Fieldwork Report	Total
Maximum Mark	12	12	8	8	12	9	9	8	12	90	10	100
Score												

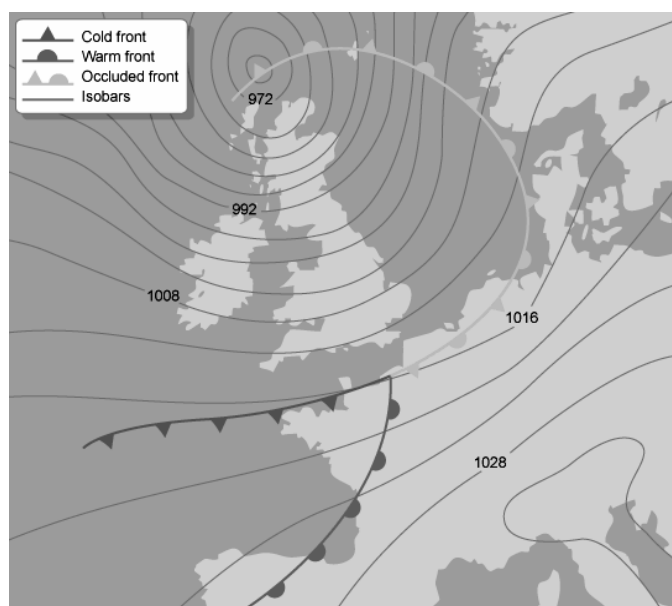
The total mark for this paper is 90. Answer all questions in the space provided. Write your answers neatly and in good English.

Name: _____

Class: _____

Weather and climate

Question 1



Underline the **correct word** from the brackets.

Fronts occur where (**three, four, two**) different air masses meet. Warm fronts are formed when (**warm, cold, frozen**) air rises over a mass of cold air. As the air lifts it cools and condenses the water vapour as wide, flat sheets of (**rain, snow, cloud**). A cold front is the zone where a cold air mass is replacing the warmer air mass. The cold air is following the warm air and gradually moves (**besides, underneath, above**) the warmer air. When the warm air is pushed (**upwards, sideways,**

downwards) it will rain heavily. As the cold front passes, the clouds roll by and the air becomes cooler. Occluded fronts occur at the point where a cold front takes over a warm front. Occluded fronts are usually associated with the air (**becoming wetter, becoming drier, remaining the same**).

12 marks

Landforms and Processes

Question 2

Answer the following questions on 'Plate Tectonics'.

a. Name the different types of plate boundaries:

- i. _____
- ii. _____
- iii. _____
- iv. _____

2 marks

b. Fill in the blanks of the following statements.

- i. Subduction zones involve an _____ plate sliding beneath a continental plate.
- ii. As the oceanic plate is forced below the continental plate it _____ due to the heat resulting from friction caused by contact with the continental plate and due to the increase in temperature as it re-enters the mantle.
- iii. Being lighter than the mantle this magma rises up through _____ in the continental crust to the surface to form volcanoes, as for example Chimborazo and Cotopaxi.
- iv. Mid-Ocean _____ are formed when two plates are pulling apart from each other so hot magma (liquid rock) emerges from the mantle and oozes forth as lava to fill the crack continuously created by plate separation.
- v. The Americas are moving away from Eurasia and Africa so this means that the Atlantic Ocean is becoming _____.
- vi. San Andreas Fault, at the junction of the Pacific and North American Plates, is an example of a _____ plate boundary.
- vii. The American Plate moves more slowly than and at a slight angle into, the Pacific Plate so instead of slipping evenly past each other these two plates tend to stick. When sufficient pressure builds up one plate is jerked forward and _____ occur.

7 marks

- c. Imagine that as an **MP** (Member of Parliament) you form part of a committee to plan how to minimise the effects of earthquakes. Give three suggestions.

3 marks

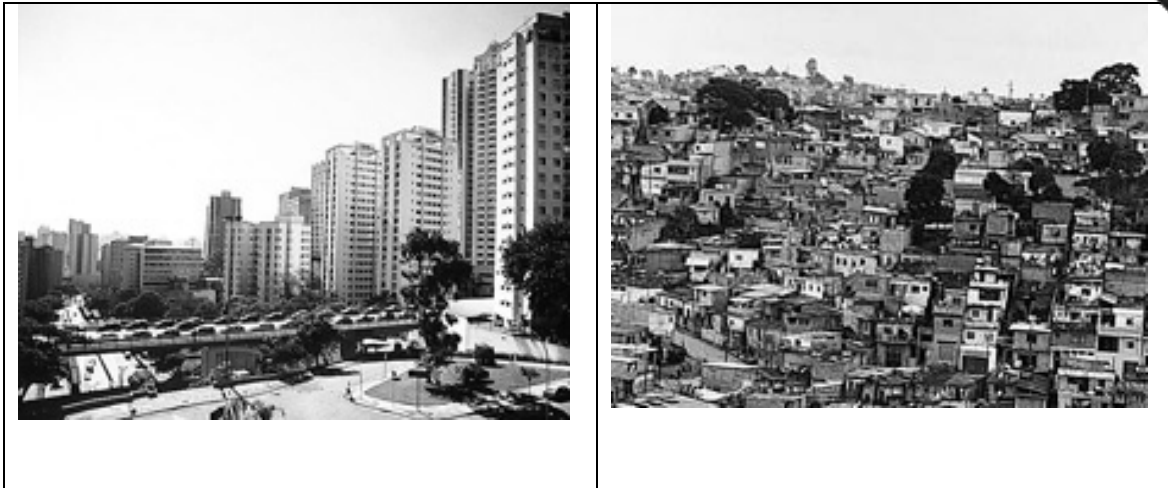
Question 3

Using the 4 words below, link the right processes by which the river transports its load to the given explanations.

Solution Saltation Suspension Traction

Processes	Explanations
	Large particles such as gravel and coarse sand are lifted and dropped along the river, so they bounce along the river bed in a series of bed.
	Larger particles like pebbles and boulders roll and slide along the river bed.
	Dissolved materials containing minerals like calcium and sodium are carried in the water. They cannot be seen by a naked eye as they get dissolved.
	Smaller particles such as clay, silt and fine sand are carried along without contact with the river bed as they are light and tiny. Materials carried in suspension usually form the greatest part of the total river bed.

8 marks

Socio-Economic Human Systems**Question 4**

The two pictures show the CBD and the shanty town of Sao Paolo in Brazil.

Continue the following sentences about the **main problems** resulting from the rapid urban growth of Sao Paolo and the attempts being made to **solve them**.

- i. Sao Paolo continues to attract more migrants but these people cannot find
.....
- ii. Poor people end up living in
.....
- iii. The city authorities of Sao Paolo have been unable to provide all residents with public services such as
.....
- iv. For most of the day the traffic is
.....
- v. The local government of Sao Paolo is setting up assisted schemes to improve
.....
- vi. Existing homes may be improved by rebuilding the houses with
.....
- vii. Self-help schemes have been set up to encourage groups of people to help
.....
- viii. The local authority will provide the breeze-blocks and roofing tiles and the group will
.....

8 marks

Question 5



Match the three types of farming given below with the corresponding characteristics.

Shifting Agriculture Intensive Commercial Farming Subsistence Farming

Characteristics	Type of Farming
Typical characteristics include excessive use of chemical fertilizers, pesticides, herbicides, hi-tech machinery per unit land.	
Very little output, if any, will be left over to sell and most will feed the farmer and his family.	
This is an agricultural system in which plots of land are cultivated temporarily, then abandoned.	
Output sold locally to supermarkets and/or exported to other countries.	
This type of farming is common in LEDCs and the farmers only use simple tools for manual labour.	
In this type of farming many use a practice of slash-and-burn as one element of their farming cycle.	
The main aim of carrying out this type of farming is earning maximum amount of profit from a given piece of land.	
This type of farming is common in MEDCs and the farmers make use of high tech equipment and computers.	
These farmers have very small plots of land.	
This system often involves clearing of a piece of land followed by several years of farming, until the soil loses fertility.	
Once the land becomes inadequate for crop production, it is left to be reclaimed by natural vegetation.	
The crops grown are for the consumption of the cultivators and the other members of the tribe.	

12 marks

Environmental Concerns

Question 6

Soil is one of the most precious natural resources on earth.

Explain **three** methods of **soil conservation** in order to avoid soil erosion.

You can choose to write about any three from these five examples:

Planting of trees

Terraces

Contour Ploughing

Crop Rotation

Controlled Grazing



- a. _____

- b. _____

- c. _____

9 marks

Question 7

- a. List these causes of flooding under the right column:

Deforestation Low lying areas Thawing of snow Bridges trapping debris
Rapid surface runoff due to urbanization Impermeable types of rock

Physical causes of flooding	Human causes of flooding

6 marks

- b. Give **three** ways by which flooding can be **reduced**.

.....
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3 marks

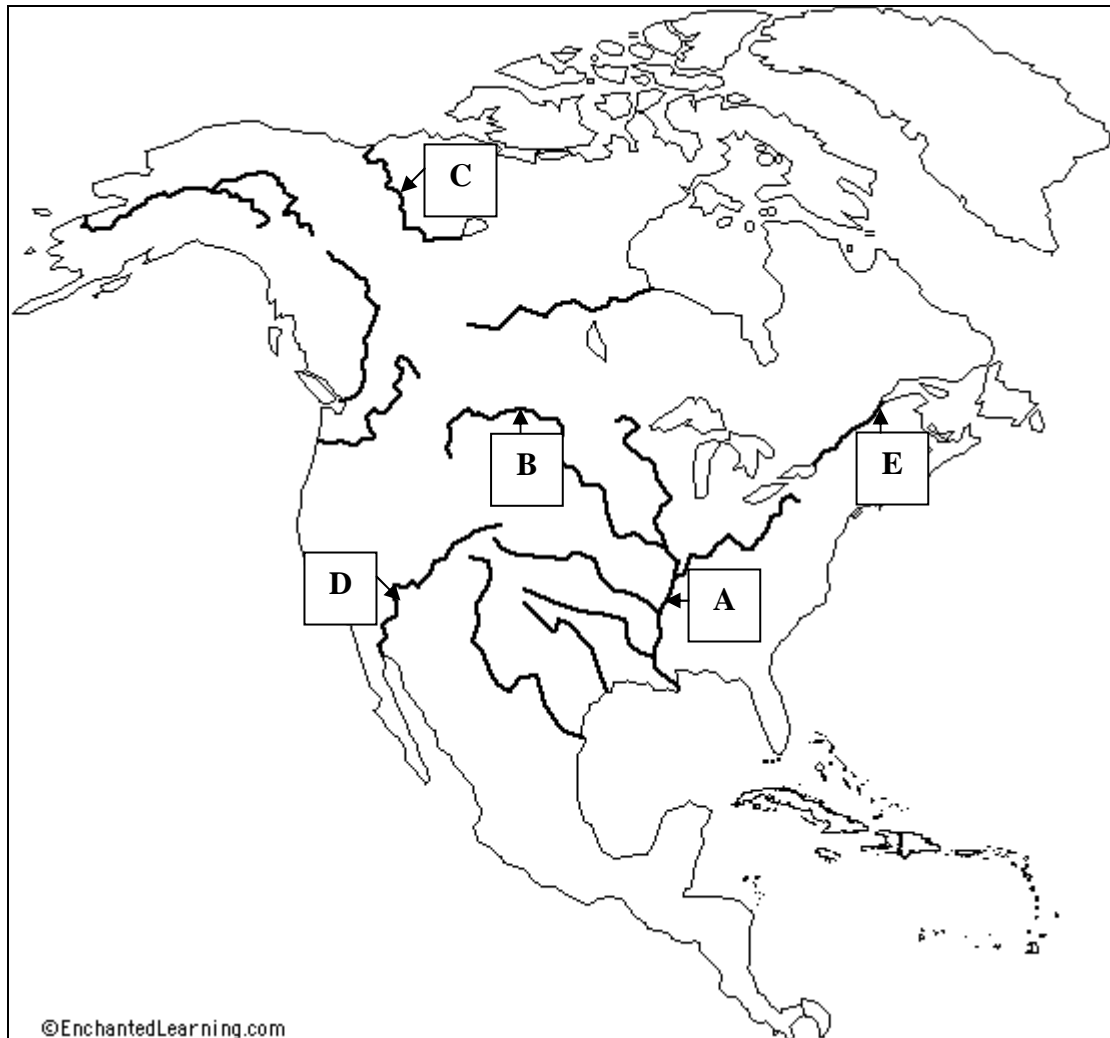
Location and Places

Question 8

Name **four** of the five rivers of North America marked by the letters **A to E**.

Choose from this list:

St. Lawrence McKenzie Colorado Mississippi Missouri

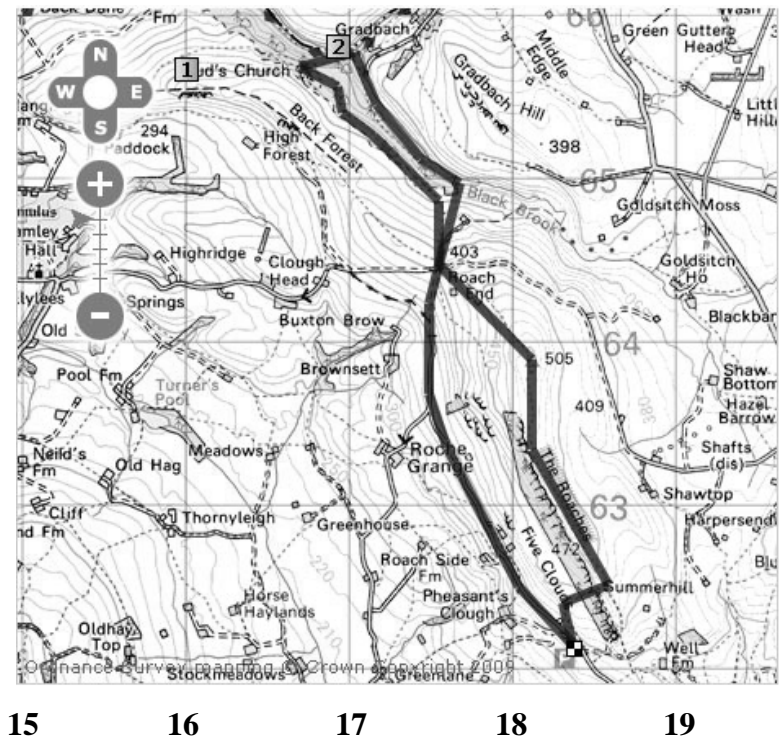


- A. _____
- B. _____
- C. _____
- D. _____
- E. _____

8 marks

Map Reading and Interpretation

Question 9



Examine carefully the given map extract and then work out the exercise.

a. Underline the correct set of **Northings** of the given map (62; 63; 64; 65;66 or 15; 16;17; 18; 19).
Mark the numbers of the **Northings** on one side of the map.

b. Name two primary activities practised in the given area.
.....

c. Give the six figure grid references of the points marked 1 and 2.
.....

d. If the scale of the map is 1:50000 (1cm represents ½ km) what is the actual straight distance between Point 1 to Point 2?
.....cmskms

e. Fill in the missing details of this description about the settlement layout of the area covered by the map.

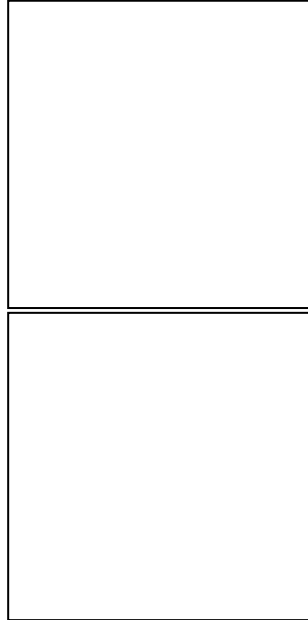
Within the area covered by the map extract there are several dispersed _____ and _____. There are also a few _____ as Gradbach and Brownsett. These hamlets developed along the secondary _____ network.

f. Two grid boxes have been **enlarged to double size** from 1:50000 to 1:25000.

Write the correct Eastings and Northings in their right position to correspond to grid boxes **18** and **1865**; as in the given map extract.

Then draw the enlarged secondary road starting from 185660 to 190650 in these two grid boxes.

12 marks



End of Paper