Instructions to candidates

Answer all questions in the space provided. Write your answers neatly and in good English. Credit will be given for relevant illustrations. The marks for individual questions are shown in brackets e.g. (4). There are 9 questions in all. The total mark for this paper is 90. The use of blank paper, pieces of string and calculators is allowed.

For the examiner’s use only

<table>
<thead>
<tr>
<th>Question No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Written Exam</th>
<th>Fieldwork Report</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Mark</td>
<td>12</td>
<td>8</td>
<td>12</td>
<td>8</td>
<td>12</td>
<td>8</td>
<td>12</td>
<td>8</td>
<td>10</td>
<td>90</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

Question 1 – Mapwork

Examine carefully the topographical (OS) map 1:25000 (Figure 1 on page 12) and then work out the given exercise.

a) Fill in the missing details to show the importance of the settlement of Chichester in the area covered by the topographical (OS) map given.

<table>
<thead>
<tr>
<th>Name of Building</th>
<th>Six Figure Grid Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>861049</td>
</tr>
<tr>
<td>Hotel</td>
<td></td>
</tr>
</tbody>
</table>

(4)

b) Give the six figure grid reference of the point shown by the arrow. _______________

What is the actual distance from this point to Bosham Hoe 814017 if one walks along the secondary road? The scale of the given map is 2 cm representing 1 km. (3)
c) Name **two** important economic activities in the area. Mention the evidence related to the named activities.

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________ (2)

d) In the space below, enlarge the grid box 7904 from 1 : 50000 to twice its size 1 : 25000. Include the secondary road and the location of Eastfield Farm in the enlarged grid box. (3)

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**Question 2 – Location and Places**

a) The map in Figure 2 on page 3 shows the part of the world known as the Ring of Fire where there are more than 450 volcanoes. With the help of the clues and the given initial or last letter, name the missing features in the following table.

<table>
<thead>
<tr>
<th>Number on map</th>
<th>Type of feature</th>
<th>Location</th>
<th>Name of feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volcano</td>
<td>Philippines</td>
<td>P_______________</td>
</tr>
<tr>
<td>2</td>
<td>Volcano</td>
<td>Japan</td>
<td>_______________ i</td>
</tr>
<tr>
<td>3</td>
<td>Volcano</td>
<td>United States</td>
<td>_______________ s</td>
</tr>
<tr>
<td>4</td>
<td>Volcano</td>
<td>Mexico</td>
<td>P_______________</td>
</tr>
<tr>
<td>5</td>
<td>Mountain chain</td>
<td>North America</td>
<td>R_______________</td>
</tr>
<tr>
<td>6</td>
<td>Mountain chain</td>
<td>South America</td>
<td>A_______________</td>
</tr>
</tbody>
</table>

(6)
b) Name the two oceanic plates.

<table>
<thead>
<tr>
<th>Number on map</th>
<th>Type of plate</th>
<th>Name of plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Oceanic Plate</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Oceanic Plate</td>
<td></td>
</tr>
</tbody>
</table>

(2)
Question 3 – Weather and Climate

Each of the following sentences describes a characteristic of either a depression or an anticyclone. With the help of Figures 3 and 4, write the term Depression or Anticyclone next to each characteristic.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Write Depression or Anticyclone in this column for each characteristic.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winds blow clockwise.</td>
<td></td>
</tr>
<tr>
<td>This is an area of low pressure.</td>
<td></td>
</tr>
<tr>
<td>Warmer air from the south meets cooler air from the north. The warm air then rises slowly over the cooler air.</td>
<td></td>
</tr>
<tr>
<td>This brings clouds, rain and windy weather.</td>
<td></td>
</tr>
<tr>
<td>This is an area of high pressure.</td>
<td></td>
</tr>
<tr>
<td>This brings settled, fine weather.</td>
<td></td>
</tr>
</tbody>
</table>

(12)
Question 4 – Landforms and Processes

Structure of the Earth

a) The Earth is divided into four main layers: the crust, the mantle, the outer core and the inner core. Underline the correct answer for each layer.

**Crust**
The crust is (molten, solid, liquid).

**Mantle**
The mantle is the (widest, thinnest, central) section of the Earth for it has a thickness of approximately 2,900 km.

**Outer Core**
It is extremely (cold, hot, cool) with temperatures up to 5,500 degrees Celsius.

**Inner Core**
This layer is believed to be (solid, molten, semi-solid) because of the immense pressure placed upon it.

b) What is causing the tectonic plates to move?

__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

(2)
**Question 5 – Landforms and Processes**

a) List the following river features under the right column to show whether they were formed in the **Uplands** or in the **Lowlands**.

- meanders,  V-shaped valleys,  waterfalls,  deltas,  interlocking spurs,  gorges,  ox-bow lakes,  flood plain

<table>
<thead>
<tr>
<th>Upland River Features</th>
<th>Lowland River Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

Figure 6

b) Fill in the blanks to explain the river features.

**V shaped valleys** – As a river flows over steep slopes, the water makes ________________ erosion.

**Waterfalls** – A waterfall will form where a band of harder rock lies over a softer rock. The river flows over the edge of the harder, more resistant rock, into the plunge ________________. The softer rock is eroded from below, creating an ________________.
Gorge – A ____________________ sided valley forms when the waterfall retreats.

Meanders – As the river erodes laterally, to the right side and then to the left, it forms large ____________________ called meanders.

Flood plain – A flood plain is the area around a river covered by water in times of flood. A flood plain is a very fertile area due to the rich ____________________ deposited by flood waters.

Deltas – Deposition at the ____________________ of a river can form deltas. A delta is formed when the river deposits its material faster than the ____________________ can remove it.

Question 6 – Socio Economic Human Systems
Imagine that as a farmer who has studied agriculture at university, you are giving a talk to Form IV Geography (Option) students on agriculture.

Fill in the missing details of the following flow diagram to explain that a farm can be viewed as a system, with inputs, throughputs (or processes), outputs and feedback.

Physical Inputs – soil
Give one other example – ____________________

Human Inputs – labour
Give one other example – ____________________

Processes – milking
Give three other examples:
____________________
____________________
____________________

Feedback:
profits; seeds; animal feed;
manure; knowledge

Positive Outputs: milk, meat
Give two other examples:
____________________
____________________

Negative Outputs: soil erosion
Give one other example:
____________________

(8)
Question 7 – Socio-Economic Human Systems

Write True or False next to each of the following sentences which refer to the Demographic Transition model (Figure 7).

![The Demographic Transition](image)

Figure 7

a) The United Kingdom is in Stage 4 of the Demographic Transition model. ____________

b) Stage 1 is associated with the tribes of the Amazon Rainforest as the people living at this stage have little knowledge about reducing the death rate and they are still affected by diseases, poor health care, poor water quality and a poor food supply. ____________

c) The death rate falls in Stage 2 since the birth rate has fallen as well. ____________

d) The fall in the birth rate in Stage 3 is due to better access to contraception, more family planning education, working women getting married and having children later and less need for children as a labour source. ____________

e) In Stage 4 both the birth rate and the death rate are high; so the population growth is high as well. ____________

f) If a fifth stage is added to the model to include populations which are falling, as in Sweden and France, this would show that the death rate is higher than the birth rate. ____________

(12)
Question 8 – Environmental Concerns

As a Geography (Option) student, write four sentences for your school magazine to explain how agricultural processes can cause soil erosion and/or pollution. You can choose from the following points – pesticides, chemicals, fertilisers, removal of rubble walls or hedges, overgrazing, removal of trees, up and down ploughing, monoculture.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

(8)
Question 9 – Environmental Concerns

a) Read the following information on the Three Gorges Dam of China and then choose two advantages and two disadvantages of this dam which are mentioned in the given paragraphs.

**Over a Million People Displaced** - The dam’s 660-kilometer-long reservoir flooded about 632 square kilometres of land including well over a thousand towns and villages. Some 1.3 million people have been relocated. Dozens of architectural and cultural sites disappeared under the reservoir. Among the most notable are relics of the ancient Ba people, who lived in the region some 4,000 years ago.

**300,000 Killed in 20th Century Floods** - Chinese authorities estimate that some 300,000 people were killed in the 20th century’s largest Yangtze River floods. Officials believe that the dam will protect some 15 million people from such deadly waters, as well as 1.5 million acres (607,000 hectares) of farmland. The wall is built to weather floods of a once-in-a-century severity.

**50 Percent Drop in Delta Sediment** - Environmentalists have warned that the dam will reduce downstream nutrient and sediment flow and seriously impact neighbouring river and seacoast ecosystems. Such changes could harm plentiful coastal fishing grounds and subject tidal wetlands to increased erosion.

**18,000-Megawatt Turbine Target** - Twenty-six turbines (scheduled for operation in 2008) are designed to produce more than 18,000 megawatts of electricity—twenty times the power of Hoover Dam.

**44,000 Tons of Cargo Passed Dam Last Year** - Last year some 44 million tons (40 million metric tons) of cargo were transported via the Three Gorges Dam. That’s up from 14.75 million tons (13.4 million metric tons) in 2003, when the reservoir first began storing water. Dam proponents stress that the dam will be a boost for Yangtze River trade, which accounts for some 80 percent of China’s inland shipping. Higher water levels will allow larger vessels to ply the river, travel faster, and motor from Shanghai, at the river’s estuary, all the way to Chongqing, on the Yangtze’s upper reaches.

*Source: nationalgeographic.com*
Two advantages:

___________________________________________________________________________

___________________________________________________________________________

(4)

Two disadvantages:

___________________________________________________________________________

___________________________________________________________________________

(4)

b)  Do you agree that such big dams should be built? Explain why?

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

(2)
Figure 1 (OS Map Question 1)