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.

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

a) Name two buildings and their six figure grid reference to show the importance of the settlement of Chichester in the area shown by the map.

<table>
<thead>
<tr>
<th>Name of Building</th>
<th>Grid Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></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? ____________________________ (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 outline of the coastline, 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 (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 given clues, give the names of the missing features numbered 1 to 8 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></td>
</tr>
<tr>
<td>2</td>
<td>Volcano</td>
<td>Japan</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Volcano</td>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Volcano</td>
<td>Mexico</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Mountain chain</td>
<td>North America</td>
<td></td>
</tr>
</tbody>
</table>
| 6             | Mountain chain      | South America|                 | (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

Show the main differences between a depression and an anticyclone by filling in the related characteristics for each in the following table. Refer to Figure 3 and Figure 4 to help you.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Depression</th>
<th>Anticyclone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of weather</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air circulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strength of wind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Season when most common in Malta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Question 4 – Landforms and Processes

Structure of the Earth

Figure 5

a) The Earth is divided into four main layers: the crust, the mantle, the outer core and the inner core. Give two points to describe each layer.

Crust
_______________________________________________________________________
_______________________________________________________________________(2)

Mantle
_______________________________________________________________________
_______________________________________________________________________(2)

Outer Core
_______________________________________________________________________
_______________________________________________________________________(1)

Inner Core
_______________________________________________________________________
_______________________________________________________________________(1)

b) Explain what convection currents are and where they occur inside the earth.
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________(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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<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 6

b) Explain any four of the above eight river features.

i. ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________

ii. ______________________________________________________________________
    ______________________________________________________________________
    ______________________________________________________________________
    ______________________________________________________________________
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 System

Answer the following questions related to the Demographic Transition Model in Figure 7.

**The Demographic Transition**

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**Figure 7**

a) Peru has a high birth rate and a death rate which is falling rapidly. In which stage of the Demographic Transition Model would you place Peru?

________________________________

b) The tribes of the Amazon Rainforest are in Stage 1. Explain why.

_______________________________________________________________________

_______________________________________________________________________

c) Why is the death rate falling in Stage 2?

_______________________________________________________________________

_______________________________________________________________________

d) Why is the birth rate falling in Stage 3?

_______________________________________________________________________

_______________________________________________________________________

e) Why is the growth rate of the population very low in Stage 4?

_______________________________________________________________________

_______________________________________________________________________

f) It has been suggested that a fifth stage be added to the model as the population of some countries is falling. If this fifth stage is added to the model, which would be higher: the birth rate or the death rate?

_______________________________________________________________________

(12)
As a Geography (Option) student, write a paragraph for your school magazine to explain how agricultural processes can cause soil erosion and/or pollution.

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

(8)
Question 9 – Environmental Concerns

a) Read the following information on the Three Gorges Dam of China. Then, using your own words, give two advantages and two disadvantages of this dam mentioned in the given extract.

Over a Million People Displaced - The dam’s 660 kilometre-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 dam is built to reduce severe flood risks.

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 through the 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 huge dams should be built? Explain why.

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

(2)
Figure 1 (OS Map Question)