**GEOGRAPHY** 

Physical features and climate

## Forbidding planet



Michael Doran has been teaching geography at the Institute since 1995. He is an experienced Leaving Cert examiner and has written many articles on the subject

#### **Introduction**

You now have only a few months to go until the exam but you still have plenty of time to revise. You can make sure that you are well prepared by using past exam papers. This will help you to really understand the type of exam you will face. It will make it easier to work through the many topics you have covered since first year.

#### Remember

Check the lay-out of the exam paper. How are the questions set out?

Take note of the time you have to answer the paper – two hours.

For every topic, look through the exam papers for questions asked on that topic. Make sure that you can answer these questions. Write out sample answers.

#### Section 1

#### 2013: QUESTION 11 - AID

Circle the correct option for each of the following statements.

- (i) Bilateral aid is given by charitable organisations. True/False
- (ii) Emergency aid is given in times of crisis, eg natural disasters. *True/False*
- (iii) Development aid is short-term aid. *True/False*

#### Common error

Column X

Each correct answer is worth one mark. A common error is that students get the different types of aid mixed up.

## 2013: QUESTION 18 – ORDNANCE SURVEY MAP

In the boxes provided, match each of the letters in column X with the number of its pair in column Y. One match has made for you.

Column Y

Α	S 955 386	1	Garda Station						
В	T 009 381	2 Moated Site							
С	S 953 374	3	Golf Course						
D	T 001 313	4	Spot						
X			Υ						
Α			3						
В			4						
С			2						

#### Note

Red text above indicates correct answers.

#### ${\color{red}\textbf{Common error}}$

Each answer is worth one mark. Some students make mistakes when reading grid references.

## 2011 QUESTION 6 – WEATHER INSTRUMENTS

Examine the photograph at left and complete the paragraph below.

"This white box is known as a Stevenson screen. Temperature is measured within the box using a maximum and minimum thermometer. Also found inside the box is a hygrometer which measures humidity.

#### Common error

Some students are unsure of the different weather instruments and what they are used for, eg the hygrometer.

## Section 2 2012 QUESTION 1B-VOLCANOES

(i) Name one example of a volcano. (ii) With reference to the diagram below, explain how volcanoes occur.

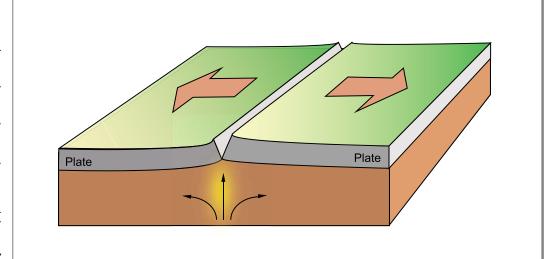
#### Answer

(i) Mt Etna, Sicily. (Two marks)

(ii) A volcano is a mountain that forms from the eruption of volcanic material. Most volcanoes will form at or near the edges of plates. This is because the crust is weak. In the diagram shown in this question, the crust is being pushed apart by magma rising up from the mantle. This is an example of a constructive plate boundary, eg the Mid-Atlantic Ridge.

The weakened crust allows hot molten magma to force its way up through cracks in the crust. It will then erupt as lava onto the surface. Ash, dust, cinders and gases are also blown out during the eruption. All







Above: 2012 question 1B, diagram 1; Top: Mount Etna; Left: 2011 question 6, a Stevenson screen this erupted material will build up around the point where the eruption occurs. Each eruption adds material to the growing vol-

#### Studenttir

Make sure you have clear statements such as those outlined above. Make sure you explain each statement.

#### Common error

The answer should have at least one reference to the diagram. Many students do not do this.

#### 2013 - QUESTION 1 C - RIVER FEATURE

(i) Name one feature formed by river deposition and explain with the aid of a labelled diagram, how it was formed.

#### Marking scheme

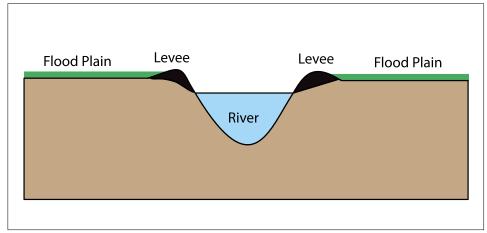
- Name of landform: one mark.
- Diagram: one mark.
- Explanation: eight marks.

   Two statements: two marks each.
- Explaining each statement: two marks each.

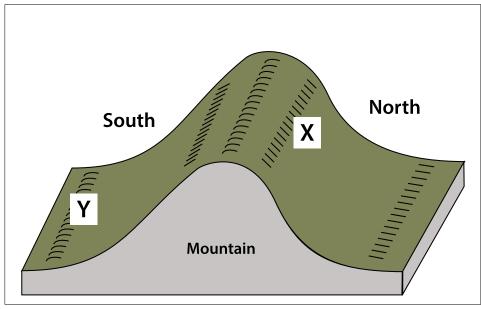
#### Answer

- Name of landform-levee.
- See levee diagam above.
- Description
- A levee is a build-up of deposition beside a river channel. It will most likely form in the lower course/old-age stage of a river.
- These features have formed along many rivers including the River Liffey and the Mississippi.
- Formation
- In the lower course will transport a large load downstream. This is all the material carried or moved by the flowing water. This includes light material such as clay particles carried in suspension. Heavier objects such as stones and pebbles will be rolled and bounced along the river bed.
- -Deposition will occur when the river channel fills with water and floods the land beside the channel. This area is called the





2013 question 1C, diagram 2



2008 question 1A, diagram 3

#### Figure 5

Month	J	F	М	А	М	J	J	А	S	0	N	D
Temp in °C	9	11	13	16	21	25	26	27	19	17	15	12
Precipitation in mm	71	55	28	19	5	5	3	0	6	16	60	79
Daily hours of sunshine	3	4	5	7	9	10	11	11	8	5	4	3

#### floodplain.

- Deposition happens because the floodwaters lose energy and cannot carry all of it's load. The heaviest part of the load will be dropped on the river bank, beside the river channel. The lighter material is carried further from the channel and is deposited across the floodplain.
- -Over time, each flooding adds new material. A sloping ridge will form beside the channel. This is the levee.

#### **WEATHER AND CLIMATE**

This is a popular topic. You should look at examples of previous exam questions.

## 2008 QUESTION 1 – CLIMATE AND PEOPLE Part A

Diagram 3 above shows a mountainous area in Europe. Explain two reasons why you would expect the place labelled "X" on the diagram to be colder than the place labelled "Y".

#### Marking scheme

- Two reasons at five marks each.
- Each of the five marks is divided into three marks for a clearly stated reason and two marks for explaining.

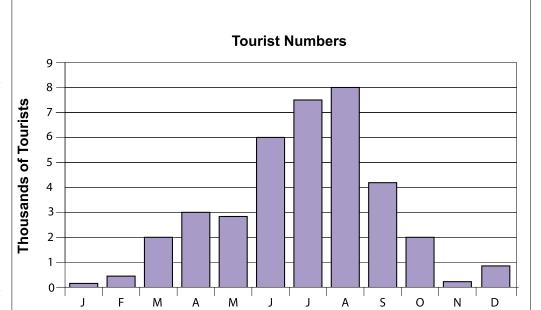
#### Answe

The place labelled "X" will be colder than the place labelled "Y" for the following reasons:

- Reason 1 Altitude.
- This is height above sea level. This has an influence on climate because, as the height of land rises, temperatures become colder. Temperatures will drop by at least 1°C for every 150 metre increase in height.

- This fall in temperatures will occur because air at higher altitudes is not able to hold heat.
- Temperatures will also drop because upland area such as the place labelled "X" will be less sheltered and exposed to colder winds.
- -Lowland places such as "Y" will have higher temperatures and are also better sheltered.
- Reason 2 Aspect.

- -This refers to the direction that a slope faces. In Europe, south facing slopes, such as at "Y" will directly receive the sun's rays and will be warmer. They also benefit from warmer winds blowing up from the south.
   North facing slopes in Europe, such as at
- North facing slopes in Europe, such as at "X", are colder because they are not directly receiving the sun's heat. They are also exposed to colder winds blowing from the north.



2008 question 1B, graph of Spanish coastal visitors

#### Part B

The graph below shows the numbers of tourists who visited a coastal resort in Spain over the course of a year.

(i) Which is the "peak" or busiest tourist month at this coastal resort?

(ii) Using the information in the table (figure 5: weather report), explain three reasons why so many people visited the resort during its peak tourist month.

#### Marking scheme

- Name the peak month: one mark.
- Three reasons at three marks each.

   Each of these three marks is divided be-
- tween two marks for stating the reason and one mark for explaining the statement.

#### Answer

- (i) The "peak" or busiest tourist month is August.
- (ii) Three reasons why so many people visited this resort during the peak month are:
- Reason 1 High temperatures.
- Temperatures in August reach an average of 27°C. This is the hottest month of the year. This will attract people from colder parts of Europe such as Ireland.
- Reason 2 Low rainfall.
- August does not receive any rainfall and is shown as Omm. This would attract people from areas that are more likely to have rainfall at that time, eg Northern Europe.
- Reason 3 Sunshine.

The table shows that August has up to 11 hours each day of sunshine. This means that there is likely to be long periods during the daytime with sunny conditions. This attracts people from areas such as Ireland where there is more likely to be cloud cover at that time of the year.

**GEOGRAPHY** 

Aerial photographs and ordnance survey maps

# Working with maps and photographs

#### INTRODUCTION

Students should be aware that at least one of the five questions in section 2 asked will refer to the ordnance survey map and the aerial photograph. It is very important for students to examine and practise answering these questions.

Students are advised to source the referenced exam papers to gain maximum benefit from the sample answers below.

#### 2013 QUESTION 5 - AERIAL **PHOTOGRAPH SKETCH MAP** Part A

Examine the aerial photograph supplied with this paper (top right).

■ Draw a sketch map of the whole area shown on the aerial photograph.

On your sketch map, show and label each of the following features:

- -A railway bridge.
- A river.
- -Two connecting streets.
- -A castle.

#### Marking scheme

Ten marks divided as follows:

■ Naming each of the four features: one mark each.

■ Showing each of the four features: one mark each.

Correct shape and orientation: two marks.

#### Common errors

Some students lose marks by drawing the wrong shape for the frame, ie a square shape instead of the rectangular shape of the 2013 aerial photograph.

Students may also lose marks by using a dot or symbol to show an area. Instead they should indicate the size of the named area.

#### Answer

See figure 1: sketch map.

#### Part B(i)

Name and locate using correct terms (right background, etc) an example of each of the following economic activities:

- -Primary.
- -Secondary.
- -Tertiary.

#### Marking scheme

Naming each activity: one mark each. Locating each activity: one mark each.

#### Answer

- Primary activity:

Farming activity in the right background -Secondary activity:

Factory located in the centre middle-ground.

-Tertiary activity:

Retail/shop in the right foreground.

Choose any one of the examples of the economic activities named above and explain two reasons why it is at its present location.

### Marking scheme

- Stating each reason: one mark each.
- Explaining each reason: one mark each.

Reasons for farming in the right back-

#### -Reason 1

The land in the right background is lowlying. Soils will be deeper and it makes it easier to farm using machinery.

-Reason 2

The land in the right background is likely to be well drained by the river. This makes it less likely that the land will become waterlogged and flooded.

Examine the ordnance survey map supplied with this paper (far right). Explain three reasons for the location of the industrial estate at S 977 419. For each reason include specific evidence from the ordnance survey map to support your answer.

#### Marking scheme

Ten marks for the three reasons. There were divided as follows:

Four marks for one reason split up as fol-

- -Statement: two marks.
- -Explaining statement: one mark.
- Evaluation of answer: one mark.
- Three marks for the other two reasons split up as follows:
- Statement: one mark.
- Explaining statement: one mark.
- Evaluation: one mark.

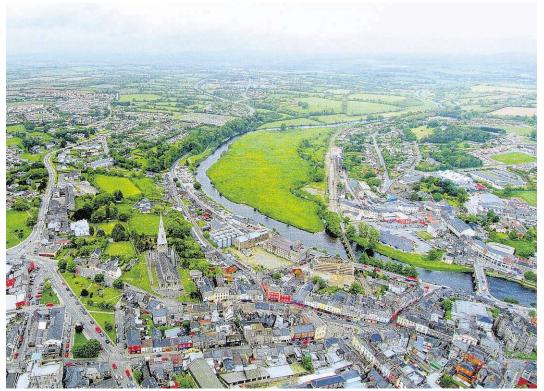
#### Answer

Three reasons for the location of the industrial estate at S 977 418:

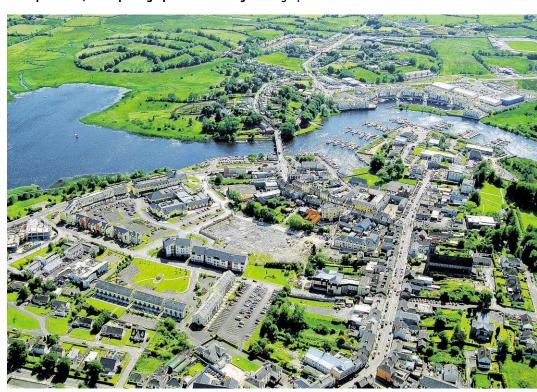
The estate is built on a very gently sloping lowland site (Statement). The grid area of S 97 41 shows wide spaces between the contour lines. This means that there are few or no obstacles to the building of factories. It also allows for the future expansion of the estate.

-Reason 2

The industrial estate is located there because it has easy access to the road network



2013 question 5, aerial photograph of Enniscorthy. Photograph: State Examinations Commission



2012 question 5, aerial photograph of Carrick-on-Shannon. Photograph: State Examinations Commission

### Key

1. Railway Bridge

2. A River

3. Two connecting streets

4. A castle

#### 2013 question 5, figure 1, sketch map

#### Map Key 1. Railway Line ++++

2. Built-up area of Carrick-On-Shannon

3. Area of Natural Woodlands 4. River Shannon

2012 question 5, figure 2, sketch map

(Statement). A national primary road, the N11, runs beside the estate. Access is provided by a third class road at S 976 422. This allows access for raw materials and supply of services and products to other parts of the country. -Reason 3

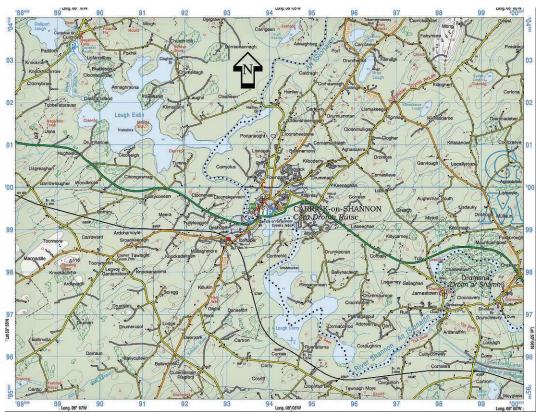
The industrial estate is located at that site because it is beside the town of Enniscorthy (*Statement*). It is just about 1 km to the north-east of the main built up area of the town. The town will provide workers for the factories and businesses on the estate. The town will also provide important support services, eg the post office located at S 974 397.

#### Common error

Some students do not provide the three reasons needed for the answer. Others do not explain the reason or do not use map evidence in the answer. It is very important to refer to the map when answering this type of auestion.

#### 2012 QUESTION 5 - AERIAL **PHOTOGRAPHS AND ORDNANCE SURVEY MAP** Part A

Examine the ordnance survey map provided (above right). Draw a sketch map of the



With reference to the ordnance survey map and aerial photograph provided, explain three reasons why Carrick-On-Shan-

#### Answer

Carrick-on-Shannon (and the surrounding area) is an important tourist destination be-

-Reason 1

Boating activities: the River Shannon is large enough for boating leisure activities. This can be seen from the aerial photograph. A marina is located in the right background. This is an important local stopping point for leisure boats. The fact that the marina is built here suggests that a large num-

-Reason 2

Cycle route: the Kingfisher cycle route begins in Carrick-on-Shannon at M 943 998. It follows a north-east route until G 980 025 where it then moves in a north-west direction. This allows people to view the surrounding landscape and other features of interest such as historical loca-

it can be easily accessed, eg from the N4.

Above: 2012, question 5,

ordnance survey

map of Carrick-on-

Right: 2013 question 5, ordnance survey map of Enniscorthy. Maps: Ordnance Survey Ireland

## At a glance – The exam paper

There are a total of 150 marks awarded for the exam paper. There are two parts to the exam paper, section 1 and section 2.

#### Section 1-60 marks

There are 20 questions in this section. You have to answer all of the questions. If you do not answer a question you will lose marks. Even if you are not sure of some of the answers, make sure that you at least try to answer each question. Section 1 accounts for 40 per cent of the total exam mark.

Each question is worth 3 marks.

Each answer needs to be short, eg give a name. ■ Some questions will

provide multiple choice answers.

Usually three or four questions will be about the ordnance survey map.

You can allow up to forty-five minutes to answer section 1. This then gives you at least two minutes to answer each question. Do not rush down your answer. Think carefully. Marks can be easily gained but they can be just as easily lost if you are careless.

#### Note

The section 1 folder must be handed back with your answer book.

Section 2-90 marks There are a total of five questions in section 2.

Each question is worth 30 marks. Students must choose three questions to answer. It is better to focus on answering three questions well rather than trying to answer four or five of the questions poorly.

Each question is divided into three or four parts. If you pick a question, you have to answer each part of that question. At least one guestion will be about the ordnance survey map and the aerial photograph. One question is headed "geographical mix". This will include a number of different

You can allow up to 25 minutes answering each of the three questions.

topics.

area shown on the ordnance survey map. On your sketch map show and label each of the following features:

- The railway line.
- The built up area of Carrick-on-Shannon.
- An area of natural woodland.
- The river Shannon. (10 marks)

#### Answer

See figure 2: 2012 sketch map.

#### Part B

The area shown on the ordnance survey map has a long history of settlement.

 Name, locate and explain, using six-figure grid references, any two examples of historic settlement on the map.

Two examples of historic settlement on the map are:

-Example 1

There is a crannog located at G 946 038 in the northern part of the map. It was a living place that was built on a lake, ie Lough Naseer. An artificial island would have been built in the lake. It would have been reached by boat. The people who lived there are likely to have farmed the land around the lake. The crannog offered people who lived there a safe living place. It dates from the iron age or Celtic times.

-Example 2

There is a megalithic tomb located at G 886 015 in the north-western part of the map. This is a burial ground where large stones were placed. The tomb would also have been built to allow people to remember and honour their dead. This historical feature dates from the neolithic period (new stone age). It is likely that people settled here because the surrounding land allowed farming. There were also close to a fresh water supply.

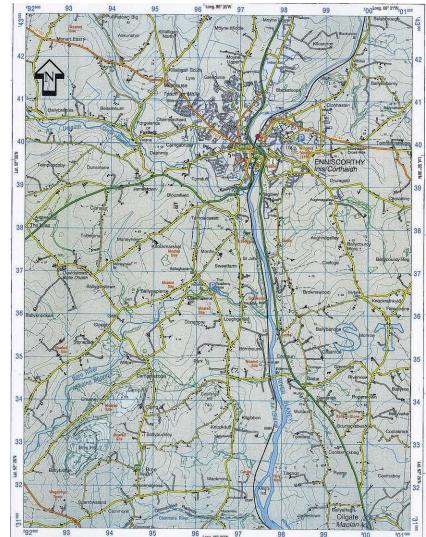
Part C

non (and the surrounding area on the map) is an important tourist destination.

cause:

ber of boats are using the river.

Tourist information office: this is located in the centre of Carrick-on-Shannon at M 939 994. This is an important local service for tourists as it will give them information about the town and the other facilities available there. As it is located in the town,



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