



Cambridge O Level

GEOGRAPHY

2217/32

Paper 3 Geographical Investigations

October/November 2021

INSERT

1 hour 30 minutes

INFORMATION

- This insert contains additional resources referred to in the questions.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.



This document has **12** pages. Any blank pages are indicated.

Fig. 1.1 for Question 1

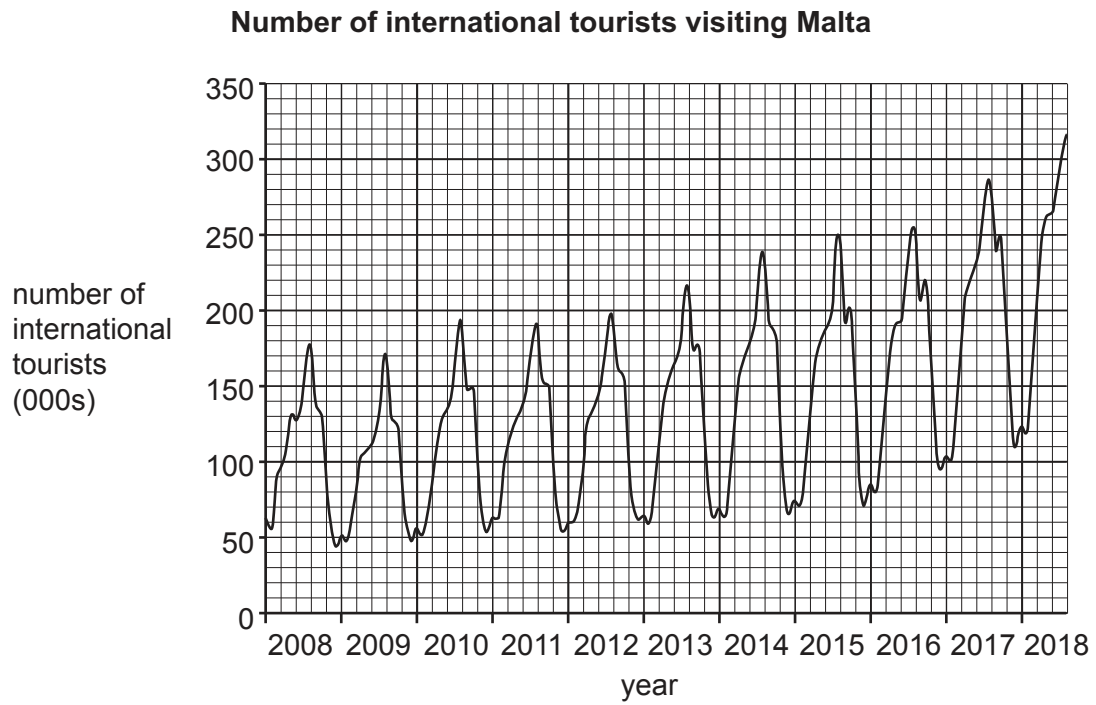


Fig. 1.2 for Question 1

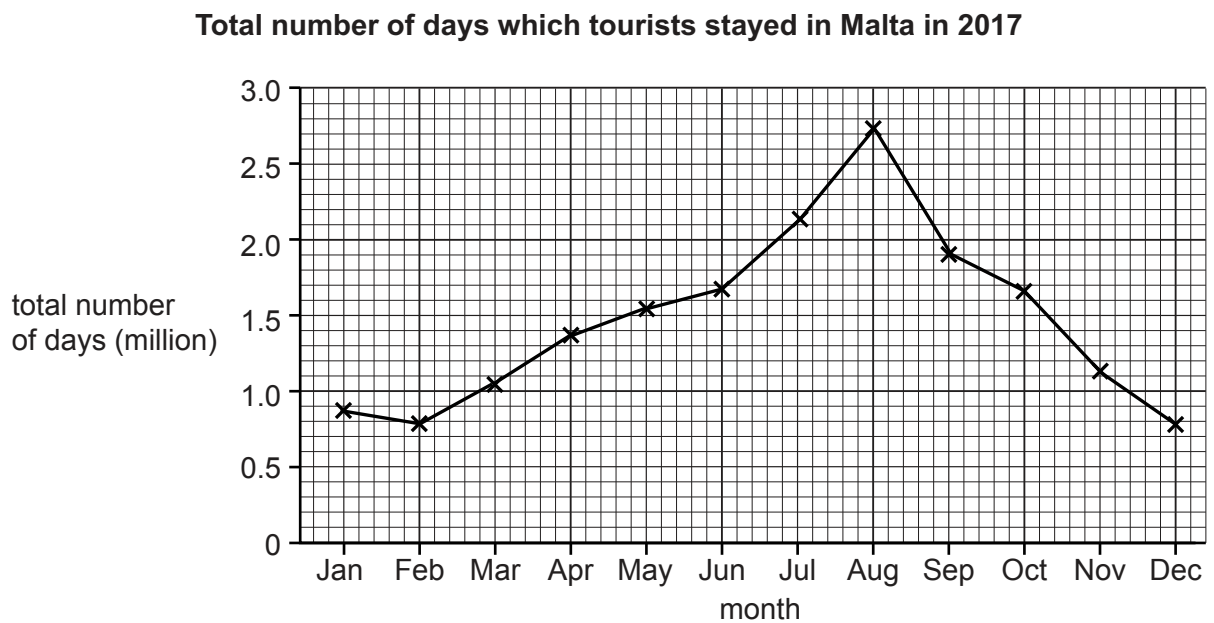


Fig. 1.3 for Question 1

Tourism questionnaire

I'm a student at college. I am doing a survey of tourism in Malta.

1. Are you a tourist? Yes No

(If the answer is 'no', end the interview)

2. Which country have you come from?

3. What is the main reason for your visit to Malta?

.....
.....

4. Which **one** of the following most influenced your choice of Malta for your holiday?

- Holiday brochure
- Internet website
- Magazine or newspaper advert
- Recommendation from friend or relative
- Tourist guide book
- Travel agent

Thank you for your time

Table 1.1 for Question 1

Answers to Question 2 in the questionnaire

country	number of tourists
Austria	2
Belgium	7
France	17
Germany	19
Hungary	2
Ireland	4
Italy	33
Netherlands	6
Poland	8
Spain	6
Sweden	6
Switzerland	4
UK	51
Other	35
Total	200

Table 1.2 for Question 1

Answers to Question 3 in the questionnaire

reason	tourists (%)			
	France	Germany	Italy	UK
enjoyed a previous visit	14	17	13	16
history and culture of the island	23	22	27	20
it is a new holiday destination to visit	15	14	13	11
sunny weather	41	43	41	45
visiting friends or relatives	5	2	5	6
water sports	2	2	1	2

Table 1.3 for Question 1

Answers to Question 4 in the questionnaire

method	number of answers
holiday brochure	9
internet website	105
magazine or newspaper advert	33
recommendation from friend or relative	30
tourist guide book	5
travel agent	18

Fig. 2.1 for Question 2

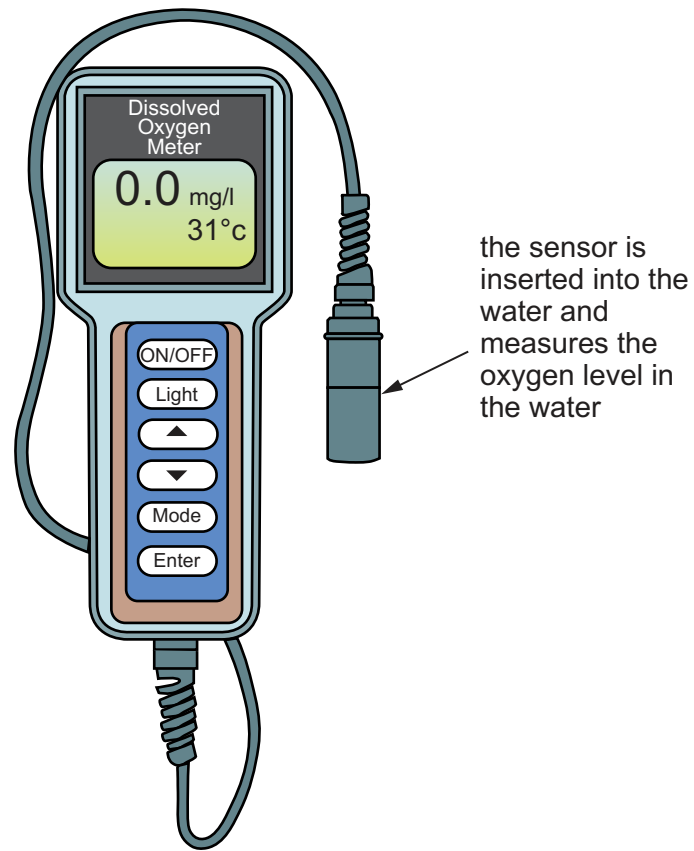
Measuring oxygen level of water**Diagram of an oxygen meter****Student using the oxygen meter**

Table 2.1 for Question 2

Results of oxygen level measurements

site	oxygen level (mg/l)	
	2015	2018
1	9.1	9.8
2	8.1	9.7
3	8.6	9.8
4	8.5	9.2
5	7.5	9.3

mg/l = milligrams of oxygen per litre of water

Fig. 2.3 for Question 2**Fieldwork to collect Biotic Index samples**

Many animals which live on the river bed cannot survive where the river is polluted. The location of different animal species in the river tells you about the quality of the water. These are called indicator species.

Put the net on the bottom of the stream and stand upstream of the net. To find these animal species disturb the river bed for two minutes by gently kicking it to dislodge the stones (this is called kick-sampling). The animals are washed into the net where they can be caught. Empty the net into a tray in order to identify the species. Put the animals back in the river after they have been identified.



Fig. 2.4 for Question 2

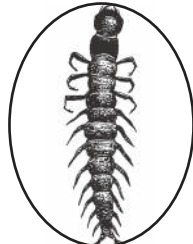
Biotic Index Recording Sheet

Trade River site number 2

Group 1: These do not live in polluted water. Circle each animal found.



Stonefly



Dobsonfly



Alderfly



Water Snipe Fly

No. of group 1 animals circled:

1

Group Value = 4

Group 2: These can live in water which is slightly polluted. Circle each animal found.



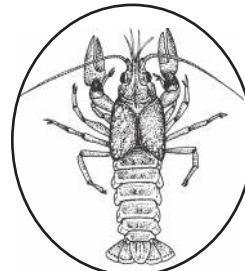
Caddisfly



Dragonfly



Water Penny



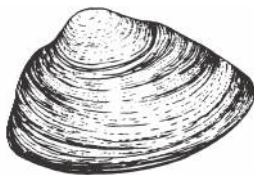
Crawfish

No. of group 2 animals circled:

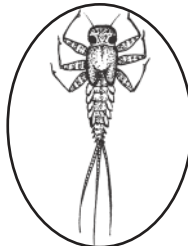
5



Crane Fly



Freshwater Mussel



Mayfly



Damselfly



Riffle Beetle

Group Value = 3

Group 3: These can tolerate more polluted water. Circle each animal found.



Black Fly



Non-Red Midge



Snail



Amphipod

No. of group 3 animals circled:

1

Group Value = 2

Group 4: These can live in polluted water. Circle each animal found.



Pouch Snail



Sowbug



Bloodworm Midge



Leech



Tubifex Worm

No. of group 4 animals circled:

1

Group Value = 1

Drawings are NOT to scale

[Turn over

Table 2.2 for Question 2

Biotic Index score for the five fieldwork sites measured in 2015 and 2018

site	Biotic Index score	
	2015	2018
1	2.0	3.0
2	2.8	2.8
3	2.2	3.3
4	2.6	2.8
5	3.0	2.8

BLANK PAGE

The boundaries and names shown, the designations used and the presentation of material on any maps contained in this question paper/insert do not imply official endorsement or acceptance by Cambridge Assessment International Education concerning the legal status of any country, territory, or area or any of its authorities, or of the delimitation of its frontiers or boundaries.

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.