UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

GEOGRAPHY   **0460/41**

Paper 4 Alternative to Coursework   **May/June 2011**

INSERT

1 hour 30 minutes

READ THESE INSTRUCTIONS FIRST

This Insert contains Figs 1 and 2 for Question 1 and Figs 4 and 6 and Tables 3 and 4 for Question 2.
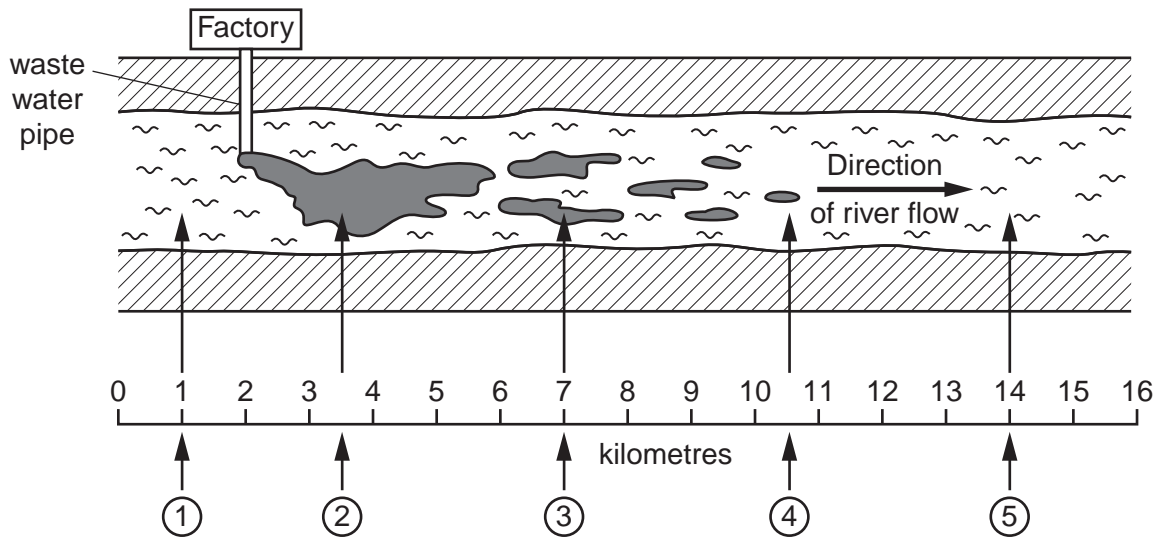
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Fig. 1 for Question 1

Results of study into pollution of the river

Key

① Testing site for Hypothesis 2
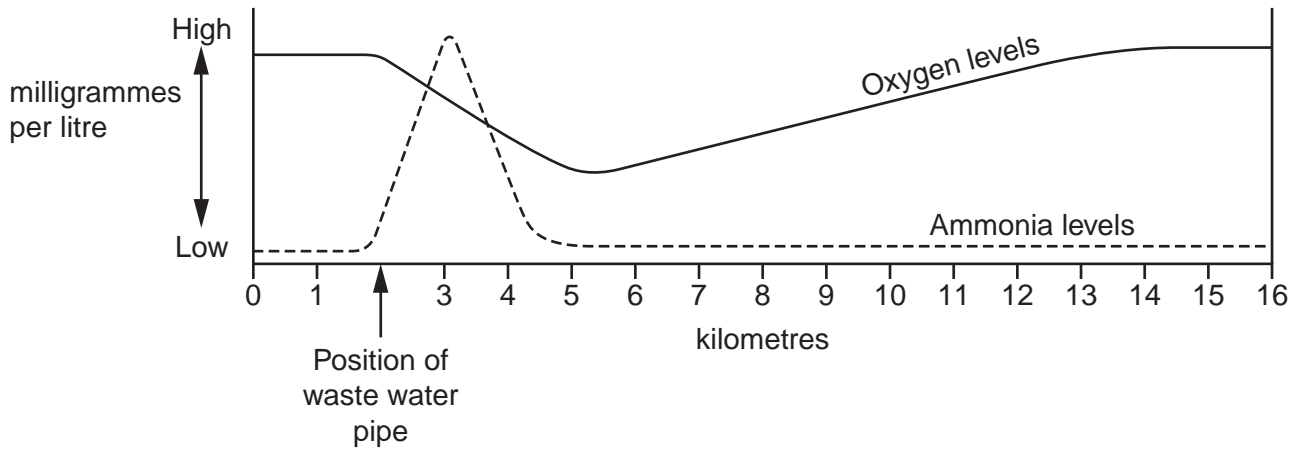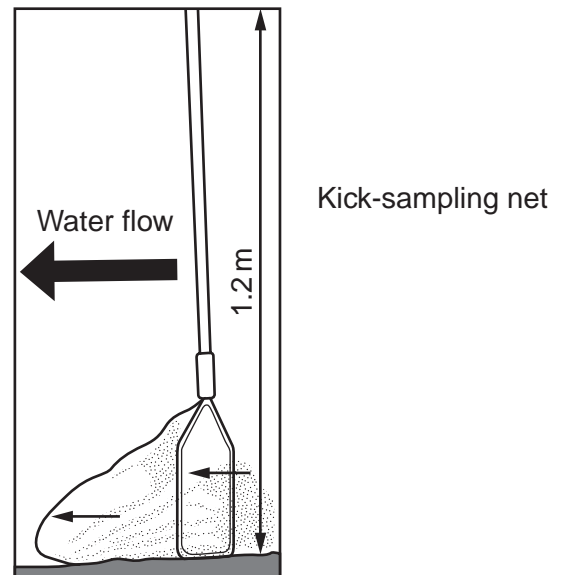
Visible pollutants

3

Fig. 2 for Question 1

Pollution investigation using indicator species

Many animals which live on the river bed cannot survive if the water quality is poor. When certain animal species are found in the river this tells you about the quality of the water. These are called indicator species which are shown on the Biotic Index.

To find these animal species the river bed should be gently disturbed for 30 seconds by gentle kicking to dislodge the stones (this is called kick-sampling). Catch the animals which are washed into a net and then empty the net into a tray to count and identify the species. Put the animals back in the river after identifying them. Do the test at least three times at each investigation site.

Use the Biotic Index to compare the level of pollution at different sites.

Water flow

1.2 m

Kick-sampling net

Biotic Index

Unpolluted   Quality of water   Very polluted
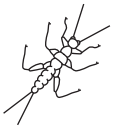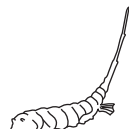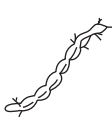
Animal species	Stonefly	Mayfly	Caddis fly	Shrimp	Water louse	Leech	Rat-tailed maggot	Bloodworm
Biotic	10	8	7	6	5	3	3	2

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Fig. 4 for Question 2

Tourist questionnaire

We are doing a tourism survey as part of our Geography coursework. Please will you answer the following questions?

1. Which continent do you come from?

   ☐ Asia   ☐ Africa   ☐ Europe

   ☐ Oceania   ☐ North America   ☐ South America

2. What are the main physical attractions you are visiting whilst in Chiang Mai?

   ☐ Mae Klang waterfall   ☐ Doi Inthanon Mountain

   ☐ Fang Hot Springs   ☐ Botanical Gardens

   ☐ Elephant camp   ☐ Orchid and Butterfly farms

   ☐ Ob Luang Gorge

3. What are the main human attractions you are visiting whilst in Chiang Mai?

   ☐ Hill tribe villages   ☐ National museum

   ☐ Shopping at the night bazaar   ☐ Buddhist temples

   ☐ Bhubing Palace   ☐ Muang Kung Earthenware village

   ☐ Royal pagodas

4. Overall which attracted you most to Chiang Mai?

   ☐ Physical attractions   ☐ Human attractions

Thank you for your time.

Table 3 for Question 2

Answers to Questions 2, 3 and 4 of tourist questionnaire

Q2 Physical attractions	Number of visits made
Mae Klang waterfall	35
Doi Inthanon Mountain	48
Fang Hot Springs	17
Botanical Gardens	12
Elephant camp	34
Orchid and Butterfly farms	6
Ob Luang Gorge	18
Total	170

Q3 Human attractions	Number of visits made
Hill tribe villages	23
National museum	10
Shopping at the night bazaar	45
Buddhist temples	37
Bhubing Palace	6
Muang Kung Earthenware village	11
Royal pagodas	8
Total	140

Q4 Overall opinion	Number of tourists
Physical attractions	38
Human attractions	32

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Fig. 6 for Question 2

Local people questionnaire

We are doing a tourism survey as part of our Geography coursework. Please will you answer the following questions?

1. Do you live in Chiang Mai?

   ☐   Yes

   ☐   No   (Finish interview if 'No')

2. What do you think are the main positive impacts of tourism in Chiang Mai?
   Number your first and second choices '1' and '2'.

   ☐ More jobs and income   ☐ Improved standard of living

   ☐ More modern services   ☐ Cleaner environment

   ☐ Improved infrastructure e.g. airport, roads

   ☐ Reduction in crime   ☐ Greater range of goods in shops

   ☐ Local people have greater global awareness

3. What do you think are the main negative impacts of tourism in Chiang Mai?
   Number your first and second choices '1' and '2'.

   ☐ Noise pollution   ☐ Air pollution

   ☐ Traffic congestion   ☐ Increase in crime

   ☐ Decline of traditional culture and way of life

   ☐ Increase in litter   ☐ Increase in cost of living

   ☐ Destruction of natural environment for hotels, shops etc.

4. Overall do you think tourism has a positive or negative impact in Chiang Mai?

   ☐ Positive

   ☐ Negative

Thank you for your time.

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Table 4 for Question 2

Answers to Questions 2, 3 and 4 of local people questionnaire

Q2 Positive impacts of tourism	First choice	Second choice	Total score using formula
More jobs and income	27	15	69
Improved standard of living	7	12	26
More modern services	2	6	10
Cleaner environment	3	1	7
Improved infrastructure	8	6	22
Reduction in crime	1	12	14
Greater range of goods in shops	6	6	18
Local people have greater global awareness	7	3	17
Total	61	61	

Q3 Negative impacts of tourism	First choice	Second choice	Total score using formula
Noise pollution	4	7	15
Air pollution	16	10	
Traffic congestion	17	14	48
Increase in crime	3	4	10
Decline of traditional culture and way of life	7	5	19
Increase in litter	3	7	13
Increase in cost of living	4	9	17
Destruction of natural environment	7	5	19
Total	61	61	

Q4 Overall impact of tourism	Answers
Positive	53
Negative	8

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