



GEOGRAPHY (PRINCIPAL)

9768/04

Paper 4 Research Topic

May/June 2015

1 hour 30 minutes

Additional Materials: Answer Booklet/Paper

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use paper clips, glue or correction fluid.

Choose Section A **or** Section B **or** Section C, according to your research topic.

Answer **three** questions, from the same section.

You are advised to spend thirty minutes on each Question.

For **Section A**, Small Scale Ecosystems, answer:

Question 1, Question 2 and **either** Question 3 **or** Question 4.

For **Section B**, Managing Rural Environments, answer:

Question 5, Question 6 and **either** Question 7 **or** Question 8

For **Section C**, Central Business Districts, answer:

Question 9, Question 10 and **either** Question 11 **or** Question 12.

The Insert contains all the Figures referred to in the Question Paper.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

The syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 3 Pre-U Certificate.

This document consists of **7** printed pages, **1** blank page and **1** Insert.

Section A: Small Scale Ecosystems

Answer **three** questions:
Question 1, Question 2
and **either** Question 3 **or** Question 4

- 1** Study Figs 1 and 2, which show information about a coastal sand dune ecosystem in the UK.

Fig. 1 shows soil moisture content for selected soil water pH values in a coastal sand dune ecosystem.

- (a) Giving evidence from Fig. 1, state which pH value had the largest range of soil moisture. [2]
(b) Using Fig. 1, compare and contrast the soil moisture results for pH 7.5 with those for pH 8. [4]

Fig. 2 shows soil moisture content and distance from the high water mark along a transect across a coastal sand dune ecosystem.

- (c) To what extent does there appear to be a correlation between soil moisture and distance from the high water mark shown on Fig. 2? [6]
(d) Assess the value of diagrams such as Figs 1 and 2 to those who study small scale ecosystems. [8]

2 Study Fig. 3, which shows information about Piperdam Country Park, Dundee, Scotland.

(a) Using Fig. 3, outline the challenges the managers might face in order to maintain the ecosystems in the Country Park. [5]

(b) 'The management of a small scale ecosystem needs to address issues both within and outside the ecosystem.'

From your wider study of small scale ecosystems, consider the extent to which you agree with this statement. [10]

EITHER

3 With reference to your own investigation of small scale ecosystems, discuss what considerations you took into account when establishing appropriate strategies to collect the data required for your investigation.

Begin by stating the question or hypothesis that you investigated. [15]

OR

4 With reference to your own investigation of small scale ecosystems, how successful were you in explaining your findings in terms of the geographical ideas being studied?

Begin by stating the question or hypothesis that you investigated. [15]

Section B: Managing Rural Environments

Answer **three** questions:
Question 5, Question 6
and **either** Question 7 **or** Question 8

- 5 Study Fig. 4, which shows population and service score for selected rural settlements in East Staffordshire, England, 2012.

The service score is a composite measure based on the type and number of services present in each settlement. The higher the score, the more services available.

- (a) Giving evidence from Fig. 4, state the range of service scores for the selected rural settlements. [2]
- (b) Discuss the validity of the line of best fit shown on Fig. 4. [4]

Study Fig. 5, which shows the settlement hierarchy in East Staffordshire, England in 2012.

- (c) To what extent does there appear to be a North-South divide in the categorisation of villages shown on Fig. 5? [6]
- (d) Assess the value of Figs 4 and 5 to those studying the characteristics and functions of rural settlements. [8]

- 6 Study Figs 6A and 6B, which show the village of Belford, England in 1981 and in 2005.
- (a) Using Figs 6A and 6B, describe the ways in which the functions of Belford changed between 1981 and 2005. [5]
- (b) 'Successful management of rural environments is mostly about resolving conflicting demands'.

From your wider study of managing rural environments, consider the extent to which you agree with this statement. [10]

EITHER

- 7 With reference to your own investigation of managing rural environments, discuss what considerations you took into account when establishing appropriate strategies to collect the data required for your investigation.

Begin by stating the question or hypothesis that you investigated. [15]

OR

- 8 With reference to your own investigation of managing rural environments, how successful were you in explaining your findings in terms of the geographical ideas being studied?

Begin by stating the question or hypothesis that you investigated. [15]

Section C: Central Business Districts

Answer **three** questions:
Question 9, Question 10
and **either** Question 11 **or** Question 12

- 9** Study Fig. 7, which shows pedestrian counts at 5 sites within the Central Business District (CBD) of Seattle, USA.

The pedestrian counts are taken on one weekday in the summer of each year shown.

- (a) Giving evidence from Fig. 7, which site showed the largest increase in pedestrian count from 2010 to 2013? [2]
- (b) Using Fig. 7, contrast the change in pedestrian counts at site 2 with site 5 between 2007 and 2013. [4]

Study Fig. 8, which shows land use on different floors in part of the CBD of a large city.

- (c) 'A CBD will characteristically show both horizontal and vertical land use zoning.'
To what extent does Fig. 8 support this statement? [6]
- (d) Apart from that shown on Figs 7 and 8, what other information might be required by those responsible for ensuring the sustainability of Central Business Districts? [8]

10 Study Fig. 9, which shows selected land uses in the CBD of Leicester, England.

(a) Using Fig. 9, describe how the land uses shown in the core of Leicester's CBD differ from those shown in other parts of the CBD. [5]

(b) 'The edge of the CBD should be shown as a zone, not as a sharp line.'

From your wider study of CBDs, consider the extent to which you agree with this statement. [10]

EITHER

11 With reference to your own investigation of Central Business Districts, discuss what considerations you took into account when establishing appropriate strategies to collect the data required for your investigation.

Begin by stating the question or hypothesis that you investigated. [15]

OR

12 With reference to your own investigation of Central Business Districts, how successful were you in explaining your findings in terms of the geographical ideas being studied?

Begin by stating the question or hypothesis that you investigated. [15]

BLANK PAGE

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 International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

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