OCR
Oxford Cambridge and RSA

Friday 27 May 2022 – Morning

A Level Geography

H481/01 Physical systems

Time allowed: 1 hour 30 minutes

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You must have:
- the OCR 12-page Answer Booklet
- the Resource Booklet (inside this document)
- the OS Map (inside this document)

You can use:
- a ruler (cm/mm)
- a scientific or graphical calculator

INSTRUCTIONS
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the Answer Booklet. The question numbers must be clearly shown.
- Fill in the boxes on the front of the Answer Booklet.
- Choose **one** option in Section A and answer **all** the questions for that option. Answer **all** the questions in Section B.

INFORMATION
- The total mark for this paper is **66**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **8** pages.

ADVICE
- Try to answer every part of each question you choose.
- Read each question carefully before you start your answer.

Section A – Landscape systems

Answer **all** the questions from **one** option.

Option A – Coastal landscapes

1 **(a)** Explain how coastal landscapes can be viewed as systems. **[8]**

(b) Study **Fig. 1**, which shows the relationship between spending on coastal management and time in England.

(i) Comment on **one** advantage of this data presentation technique. **[2]**

(ii) Describe the relationship shown. **[2]**

Study **Fig. 2**, which shows a correlation coefficient calculated for the data in **Fig. 1** and a table of critical values for a significance test.

(iii) With reference to **Fig. 2**, test the significance of this relationship. **[3]**

(iv) Suggest **one** reason for this relationship. **[2]**

(c)* To what extent are long-term changes more influential on coastal landscape systems than short-term changes? **[16]**

Option B – Glaciated landscapes

2 **(a)** Explain how glaciated landscapes can be viewed as systems. **[8]**

(b) Study **Fig. 3**, which shows the relationship between spending on oil pipeline management and time in Alaska, USA.

(i) Comment on **one** advantage of this data presentation technique. **[2]**

(ii) Describe the relationship shown. **[2]**

Study **Fig. 4**, which shows a correlation coefficient calculated for the data in **Fig. 3** and a table of critical values for a significance test.

(iii) With reference to **Fig. 4**, test the significance of this relationship. **[3]**

(iv) Suggest **one** reason for this relationship. **[2]**

(c)* To what extent are long-term changes more influential on glaciated landscape systems than short-term changes? **[16]**

Option C – Dryland landscapes

3 **(a)** Explain how dryland landscapes can be viewed as systems. **[8]**

(b) Study **Fig. 5**, which shows the relationship between spending on water supply management and time in the USA.

(i) Comment on **one** advantage of this data presentation technique. **[2]**

(ii) Describe the relationship shown. **[2]**

Study **Fig. 6**, which shows a correlation coefficient calculated for the data in **Fig. 5** and a table of critical values for a significance test.

(iii) With reference to **Fig. 6**, test the significance of this relationship. **[3]**

(iv) Suggest **one** reason for this relationship. **[2]**

(c)* To what extent are long-term changes more influential on dryland landscape systems than short-term changes? **[16]**

Section B – Earth's life support systems

Answer **all** the questions.

4 **(a)** Study **Fig. 7**, OS map of Wiston Park, UK.

(i) Comment on **one** advantage of this data presentation technique. **[2]**

(ii) State the distance in kilometres between 145124 and 155124. **[1]**

(iii) Suggest **two** reasons for differences in characteristics of the water cycle between **Area A** and **Area B**. **[4]**

(b) Examine the extent to which the developing oil and gas industry affects the water cycle in the Arctic tundra. **[10]**

(c)* Assess the importance of carbon to humans. **[16]**

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