

FORM TP 2015208



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MAY/JUNE 2015

CARIBBEAN EXAMINATIONS COUNCIL

CARIBBEAN ADVANCED PROFICIENCY EXAMINATION®

GEOGRAPHY

**CLIMATE, ECONOMIC ACTIVITY
AND DEVELOPMENT**

UNIT 2 – Paper 02

3 hours

20 MAY 2015 (p.m.)

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1. This paper consists of SEVEN questions. Answer FOUR questions as indicated below.
2. Section A consists of ONE question testing practical skills. This is compulsory.
3. Section B consists of SIX questions. Answer THREE questions, ONE from EACH module.
4. Write your answers in the answer booklet provided.
5. A map extract and a grid are provided for Question 1.
6. All diagrams must be well labelled.
7. You may use a silent, non-programmable calculator to answer questions.
8. You may use geometrical instruments.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

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02225020/CAPE 2015



SECTION A

Answer this compulsory question.

1. (a) Study the map extract of Pointe-a-Pierre, Trinidad (**provided as an insert**), which is on a scale of 1:25 000, and answer the following questions.
- (i) You are required to study different soil types in the area covered by the map extract.
 - a) State the location of TWO sites that you would select for your investigation, giving TWO reasons for your choice. **[6 marks]**
 - b) Identify ONE soil characteristic and suggest how it would be different at the sites selected in (i) a). **[3 marks]**
 - (ii) a) State TWO types of natural vegetation existing in the area covered by the map extract. **[2 marks]**
 - b) Describe the distribution of EACH vegetation type stated in (ii) a). **[4 marks]**
 - (iii) a) Identify THREE different types of non-agricultural economic activities found in the area covered by the map extract. **[3 marks]**
 - b) For EACH type of non-agricultural economic activity identified in (iii) a), describe ONE factor which would influence its location and development. **[6 marks]**
 - (iv) Suggest THREE reasons for the location of agricultural activities in the area covered by the map extract. **[6 marks]**

- (b) Study Table 1 which shows the percentage contribution of agriculture to GDP and employment in agriculture for selected countries, and answer the questions that follow.

TABLE 1: PERCENTAGE CONTRIBUTION OF AGRICULTURE TO GDP AND EMPLOYMENT IN AGRICULTURE FOR SELECTED COUNTRIES

Country	Contribution of Agriculture to GDP (%)	Labour Force Employed in Agriculture (%)
Jamaica	06	17
Barbados	06	10
Trinidad and Tobago	01	04
Guyana	25	30
Canada	02	02
China	10	40
UK	01	01
Bangladesh	19	45
Ethiopia	44	80

Source: Michael Clarke et al, *Geography for CSEC Nelson Thornes, Caribbean 2012*, pp. 102-103.

- (i) You are asked to determine the relationship between employment in agriculture and the contribution of agriculture to GDP.

a) State the null hypothesis. **[1 mark]**

b) Using the formula for the Spearman's rank correlation coefficient,

$$r_s = 1 - \frac{6\sum d^2}{n^3 - n}$$

calculate the r_s value. Show ALL working. **[8 marks]**

- (ii) State the nature of the relationship between the contribution of agriculture to GDP and employment in agriculture. **[2 marks]**

- (iii) Describe the relationship between the percentage contribution of agriculture to GDP and percentage of labour force employed in agriculture (shown in Table 1), among Jamaica, Canada and Ethiopia. **[4 marks]**

Total 45 marks

GO ON TO THE NEXT PAGE

SECTION B

Answer THREE questions from this section, ONE question from EACH module.

MODULE 1

Answer ONE question.

2. (a) Study the graph in Figure 1 which shows changes in temperature and concentration levels of carbon dioxide (CO₂) from 160 000 years ago to 1990, and answer the questions that follow.

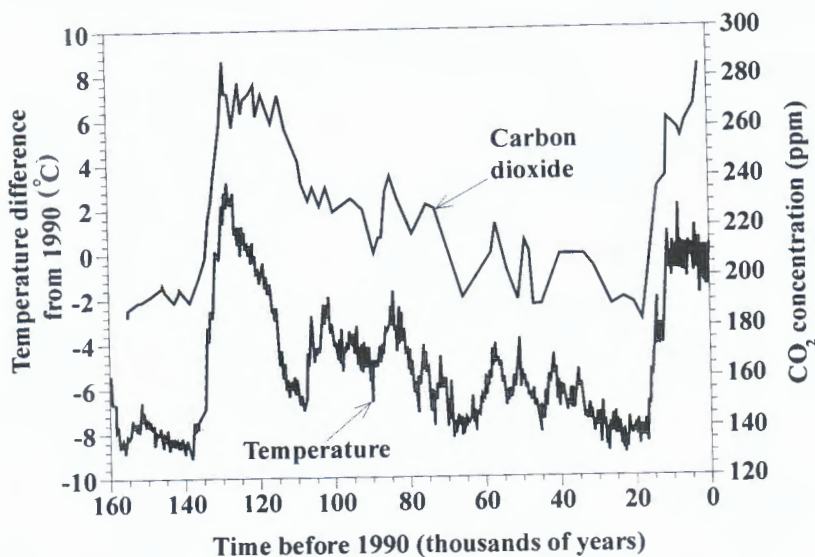


Figure 1. Air temperatures and carbon dioxide concentrations over the last 160 000 years

Source: Adapted from <http://stephenschneider.stanford.edu>

- (i) Approximately how many years ago was the world temperature similar to the temperature in 1990? [1 mark]
 - (ii) What was the LOWEST concentration levels of carbon dioxide recorded up to 1990? [1 mark]
 - (iii) How much cooler was the Earth's temperature at 20 000 years before 1990? [1 mark]
 - (iv) What term is used to describe the relationship between temperature and carbon dioxide as shown in the graph? [1 mark]
- (b) Distinguish between 'absolute humidity' and 'relative humidity'. [4 marks]

GO ON TO THE NEXT PAGE

- (c) Describe the two natural processes by which raindrops are formed. [6 marks]
- (d) Discuss FOUR factors that influence variations in atmospheric pressure on the Earth's surface. [16 marks]

Total 30 marks

3. (a) Study Figure 2 which shows two areas labelled **A** and **B**, as well as the movement of air over the edge of a high plateau, and answer the questions that follow.

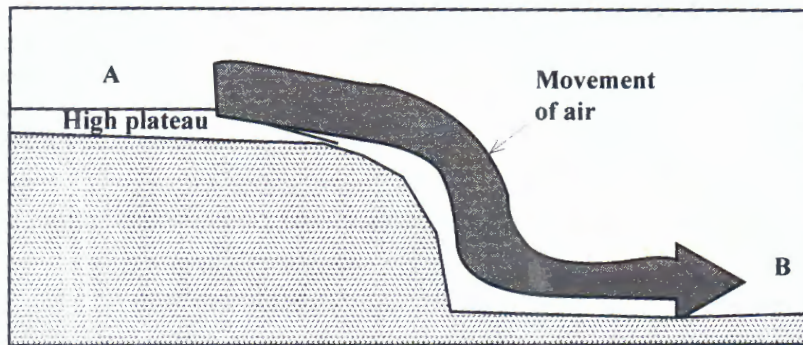


Figure 2. Movement of air over edge of a high plateau

- (i) What type of air pressure exists over
 - a) Area A? [1 mark]
 - b) Area B? [1 mark]
 - (ii) What is the name given to the air moving from Area A to Area B in the figure? [1 mark]
 - (iii) What effect would the moving air from Area A have on the temperature at Area B? [1 mark]
- (b) Outline the following processes of soil formation:
- (i) Podsolization [3 marks]
 - (ii) Calcification [3 marks]
- (c) Compare FOUR features of coniferous forests and tropical rain forests. [8 marks]
 - (d) Discuss how human factors and climatic factors influence FOUR characteristics of tropical grassland vegetation. [12 marks]

Total 30 marks

GO ON TO THE NEXT PAGE

MODULE 2

Answer ONE question.

4. (a) Study the graph in Figure 3 which shows the percentage of money earned from tourism in different parts of the world in 1970 and 2010, and answer the questions that follow.

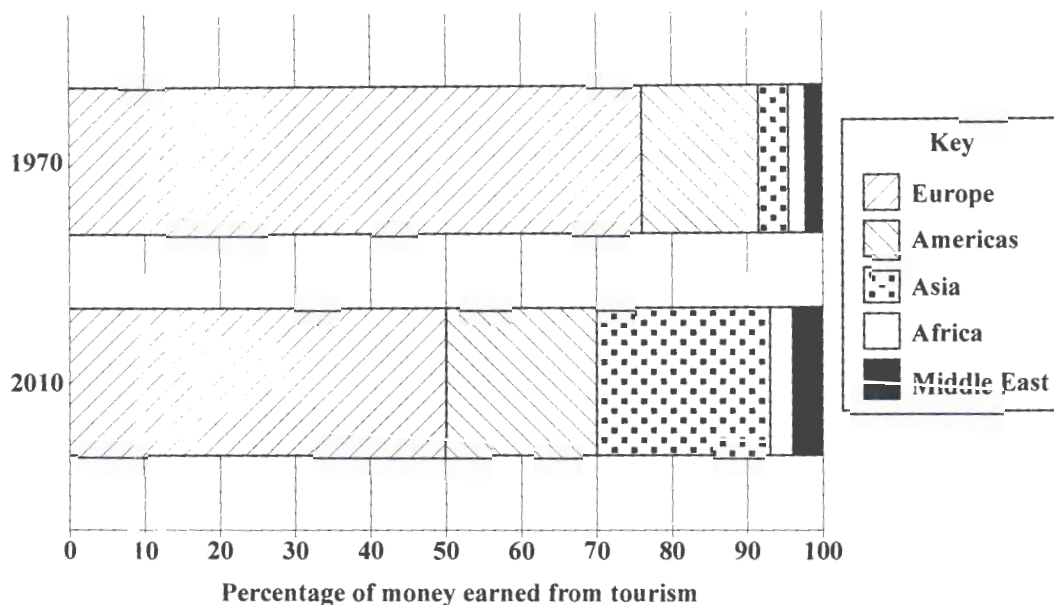


Figure 3. Percentage of money earned from tourism in different parts of the world, 1970–2010

- (i) Using the information presented in the figure, describe THREE changes in the percentage of money earned from tourism in different parts of the world between 1970 and 2010. [6 marks]
- (i) Account for the changes in THREE of the regions shown in the graph. [6 marks]
- (b) Describe the characteristics of economic activities in EACH of the following sectors:
- (i) Secondary [3 marks]
- (ii) Quaternary [3 marks]
- (c) With reference to a **named** Caribbean country, explain how hotels and tourism authorities have tried to increase the number of tourists during times of low demand. [6 marks]
- (d) Explain how THREE government policies may influence farming practices in the Caribbean. [6 marks]

Total 30 marks

5. (a) Study the graph in Figure 4 which shows the amount of land farmed organically in the United Kingdom (UK) between 1995 and 2010, and answer the question that follows.

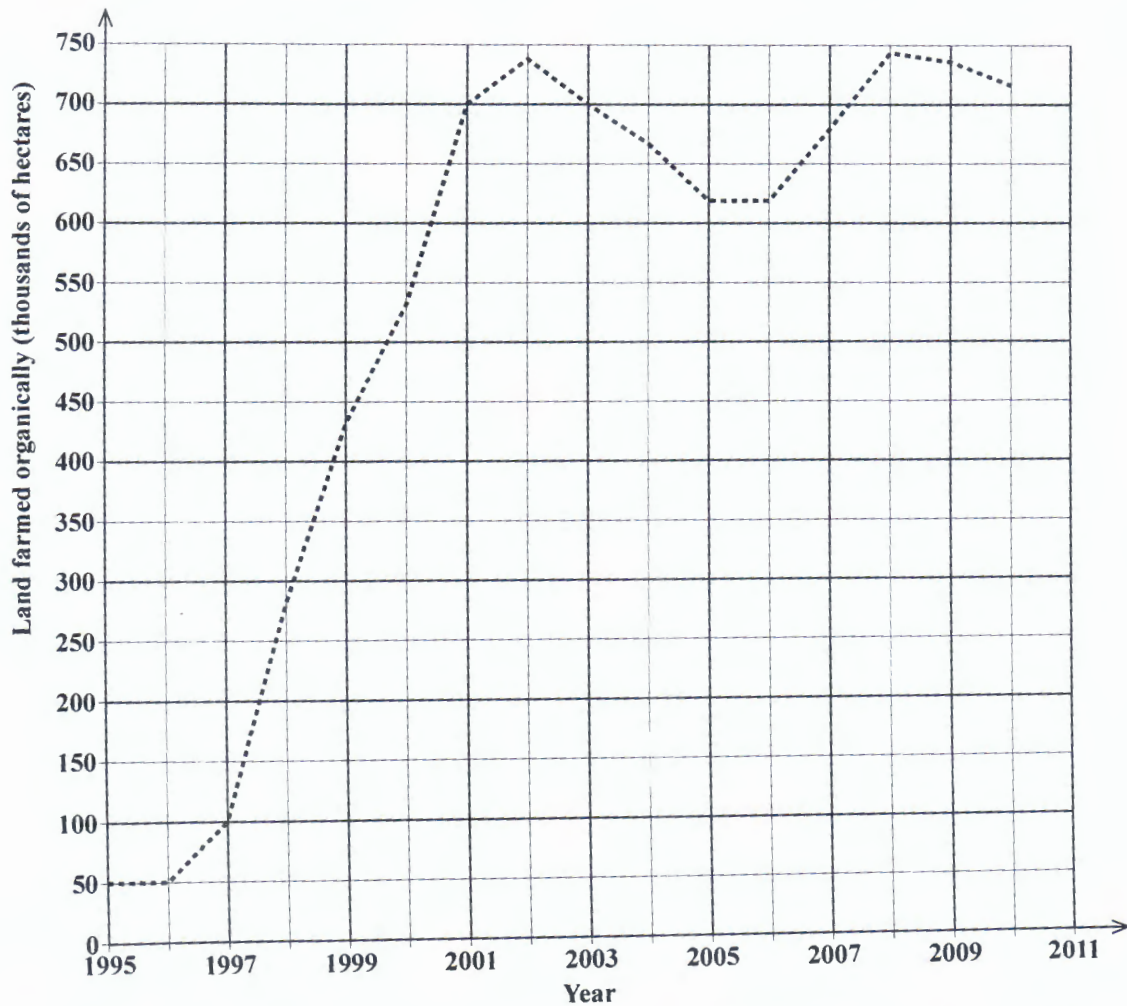


Figure 4. The amount of land farmed organically in the UK between 1995 and 2010

- Describe the trends in the amount of land farmed organically in the UK between 1995 and 2010. [4 marks]
- (b) "In many less developed countries (LDCs), it is estimated that between 10% and 40% of food is lost after harvest and never reaches the market."
Suggest THREE reasons for the loss of food referred to in the statement above. [6 marks]
- (c) Outline THREE factors (**other than** labour, energy and transport) that would influence industrial location. [6 marks]
- (d) Write an essay to discuss how ANY THREE factors from (c) are no longer relevant in a **named** MAJOR industrial region in a more developed country (MDC). [14 marks]

Total 30 marks

GO ON TO THE NEXT PAGE

MODULE 3

Answer ONE question.

6. (a) Study Figure 5 which shows the relationship between personal well-being and per capita GDP in 2007, and answer the questions that follow.

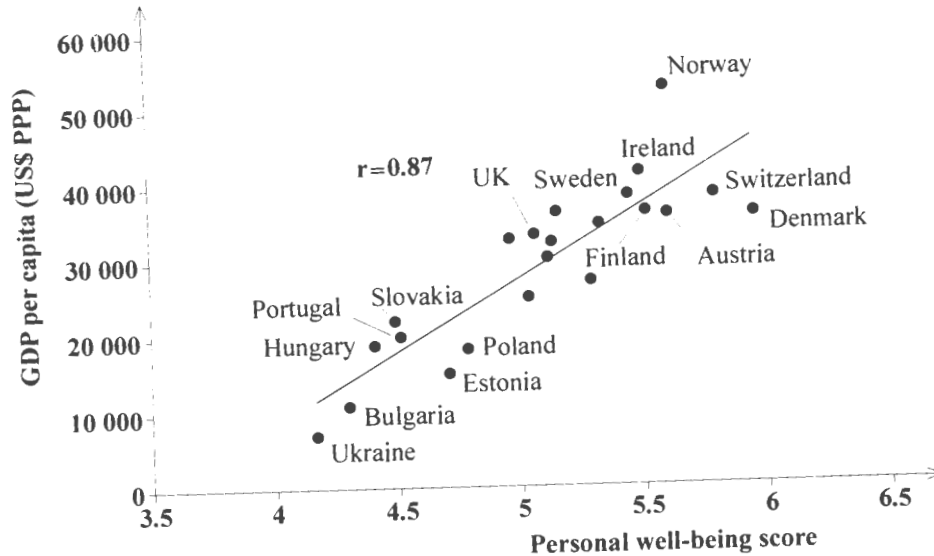


Figure 5. Relationship between personal well-being and GDP

Source: Graya, Lobaob and Martina 2012

- (i) State TWO ways in which the relationship between personal well-being and per capita GDP is shown in the diagram. **[2 marks]**
 - (ii) State the term used to describe the relationship between 'personal well-being' and 'per capita GDP'. **[1 mark]**
 - (iii) Identify the country in the figure which has the HIGHEST personal well-being score. **[1 mark]**
- (b) Describe the global distribution of poverty and how it has changed in the last four decades. **[8 marks]**
- (c) (i) Identify THREE factors (**other than** small size, small population and climate change) which limit the development of small island developing states (SIDS). **[3 marks]**
- (ii) Discuss how ANY THREE factors from (c) (i) limit the development of SIDS. **[15 marks]**

Total 30 marks

7. (a) Study Table 2 which shows the percentage distribution of foreign aid to groups of countries over three time periods, and answer the questions that follow.

TABLE 2: PERCENTAGE DISTRIBUTION OF FOREIGN AID

Country Group	1986–1987 (%)	1996–1997 (%)	2006–2007 (%)
Developing countries	25.3	19.6	22.4
Other low-income countries	13.0	14.8	18.9
Low to middle-income countries	29.7	32.9	31.3
Upper to middle-income countries	6.4	6.1	4.2
Unallocated	25.6	26.6	23.2
Total (%)	100.0	100.0	100.0
Total (US \$ million)	41,093	59,534	116,413

Determine

- (i) the period in which upper-middle income countries received MOST aid [1 mark]
- (ii) the amount of assistance developing and low-income countries received in the period 1986–1987 [1 mark]
- (iii) the percentage of total aid received by developing and low-income countries in the period 2006–2007. [2 marks]
- (b) Describe TWO stages in Friedman’s core–periphery model. [8 marks]
- (c) (i) Explain the concept of ‘cumulative causation’. [3 marks]
- (ii) With reference to a specific country, discuss how cumulative causation may result in regional disparities in EITHER income OR poverty OR health under the headings:
- Original development
 - Factors conferring regional advantage
 - Dominance of one region
- [12 marks]
- (iii) Comment on attempts by the government to reduce the disparities discussed in (c) (ii). [3 marks]

Total 30 marks

END OF TEST

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.