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**GEOGRAPHY (PRINCIPAL)**

**9768/03**

Paper 3 Geographical Issues

**May/June 2017**

**2 hours 45 minutes**

Additional Materials: Answer Booklet/Paper

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**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.

Answer **five** questions.

**Two** questions must be answered from **each** of Sections A and B.

**One** question must be answered from Section C.

Candidates are encouraged to support their answers with appropriate examples, sketch maps and diagrams.

The Insert contains the Figures and the Table referred to in the questions.

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.

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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 **4** printed pages and **1** Insert.

## Section A

Answer **two** questions from this section.

### Tectonic Hazards

- 1 Table 1 gives details of the magnitudes, on the Richter scale, of selected earthquakes and the number of lives lost as a result of these earthquakes.
- (a) State **two** secondary hazards associated with earthquakes. [2]
- (b) Using Table 1, describe the relationships between earthquake magnitude and lives lost. [4]
- (c) Suggest reasons for the relationships you have described in (b). [5]
- (d) To what extent can the hazardous effects of earthquakes be minimised by the modification of buildings? [9]

### Meteorological Hazards

- 2 Fig. 1 shows the area of land that might be flooded as a result of storm surges of varying heights at Corpus Christi, Texas, USA.
- (a) State **two** ways that meteorological hazards may be classified. [2]
- (b) Using Fig. 1, describe the pattern of areas of potential flooding of depth 1–2 metres. [4]
- (c) Briefly explain the possible effect of climate change on the intensity of tropical cyclones. [5]
- (d) Examine the ways that risk modification of **one** meteorological hazard can be adapted to deal with a possible increase in intensity and frequency of the hazard. [9]

### Hydrological Hazards

- 3 Fig. 2A shows December 2013 rainfall as a percentage of the 1981–2010 December average for Great Britain.
- Fig. 2B shows January 2014 rainfall as a percentage of the 1981–2010 January average for Great Britain.
- (a) Define the hydrological term *throughflow*. [2]
- (b) Contrast the pattern of rainfall of greater than 200% of average shown on Fig. 2A with that shown on Fig. 2B. [4]
- (c) With the aid of a diagram(s), briefly explain how rock type may affect the storm hydrograph of a drainage basin. [5]
- (d) How far can soft engineering solutions prevent rivers from flooding? [9]

## Section B

Answer **two** questions from this section.

### Crime Issues

- 4 Fig. 3 shows crimes against property in the USA for 2012.
- (a) State **two** characteristics of the physical and built environment that may promote vulnerability to crime. [2]
  - (b) Using Fig. 3, describe the variations in crimes against property. [4]
  - (c) Outline local scale initiatives to combat crime against property. [5]
  - (d) Assess the social impacts on communities of high levels of crime. [9]

### Health Issues

- 5 Fig. 4 shows changes in life expectancy in 1990–2012 for a selection of world regions.
- (a) Define the term *life expectancy*. [2]
  - (b) Using Fig. 4, describe the variations in life expectancy. [4]
  - (c) Briefly explain **two** reasons why life expectancy is increasing in many countries at lower levels of development. [5]
  - (d) ‘International migration makes it more difficult to control the spread of disease.’  
Briefly discuss the validity of this statement. [9]

### Spatial Inequality and Poverty Issues

- 6 Fig. 5 shows poverty rates for selected regions of the USA between 1992 and 2012.
- (a) What is meant by the term *social exclusion*? [2]
  - (b) Using Fig. 5, compare and contrast the trend in poverty rates for the South and the Midwest. [4]
  - (c) Briefly discuss why the poverty trap is difficult to resolve. [5]
  - (d) Assess how **either** Rostovian **or** neo-Marxist theories help in understanding unequal global development. [9]

**Section C**

Answer **one** question from this section.

7 Discuss the view that vulnerability to geographical hazards is related to the level of development of the area concerned. [25]

8 'Geographical issues are becoming more numerous and more serious.'

Discuss the validity of this statement with respect to an area you have studied. [25]

9 'When developing management strategies it is difficult to differentiate between geographical issues and natural hazards.'

Discuss the validity of this statement. [25]

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