

**GEOGRAPHY
HIGHER LEVEL
PAPER 2**

Tuesday 18 May 2004 (morning)

2 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Answer four questions:
 - two from Section A;
 - one from Section B;
 - one other from any Section (A, B or C).
- Each question must be selected from a different theme.

SECTION A

*Answer at least **two** questions from this section and each question must be taken from a different theme. (Do not answer both an essay and a structured question on the same theme.)*

Case studies and examples should be used to illustrate answers and, where appropriate, they should be specifically located. Include well drawn, large, relevant maps, sketches, tables and diagrams as often as applicable.

A1. Drainage basins and their management

Either

(a) Essay

Discuss how changes in base level of a large meandering river affect the physical and human landscape.

[20 marks]

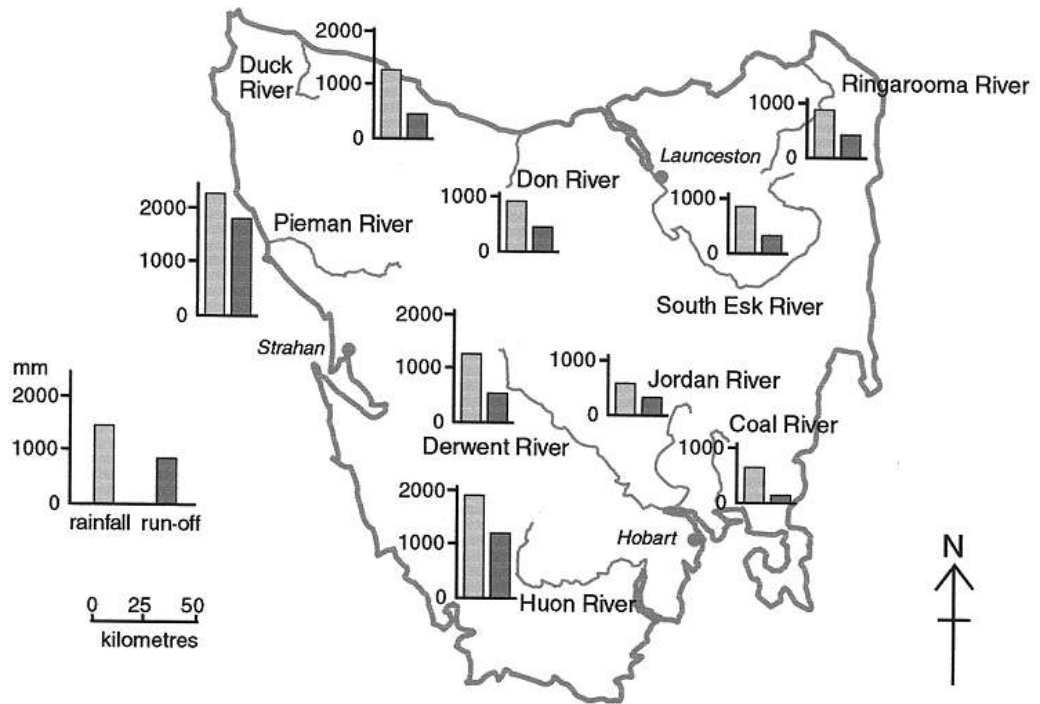
(This question continues on the following page)

(Question A1 continued)

Or

(b) Structured question

The map shows the average annual rainfall and average annual run-off (surface flow) for the major river basins on the island of Tasmania, Australia.



[Source: adapted with permission from DPIWE Government of Tasmania]

- (i) Describe the patterns of rainfall **and** run-off in Tasmania as shown on the map. [4 marks]

- (ii) With the aid of a diagram, examine the factors responsible for determining the amount of run-off. [6 marks]

- (iii) A consultant is preparing a flood-prevention plan for a town situated close to a large river. Apart from rainfall and run-off, discuss the other geographical information that would be useful. [10 marks]

A2. Coasts and their management

Either

(a) Essay

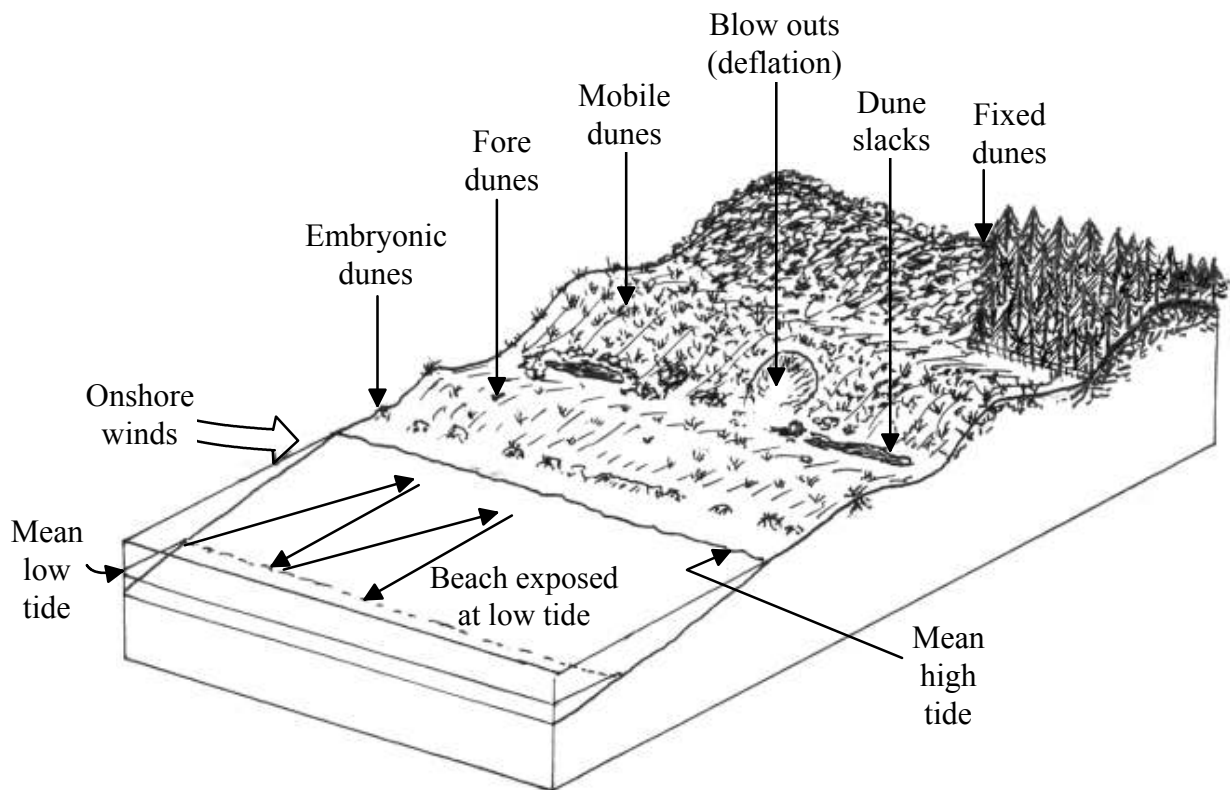
Describe and evaluate the different strategies used to cope with the hazard of coastal flooding.

[20 marks]

Or

(b) Structured question

The diagram shows movement on coastal sand dunes.



(i) With reference to the diagram, explain how beach material is moved along the coast.

[3 marks]

(ii) Explain why the size and stability of coastal dunes change with increasing distance from the sea.

[5 marks]

(iii) Using examples, assess the impact of human activity in coastal sand dune areas.

[12 marks]

A3. Arid environments and their management

Either

(a) Essay

“When humans interact with the environment in hot arid areas, land-use issues often arise. How vulnerable countries are to these issues will depend on their level of economic development.”

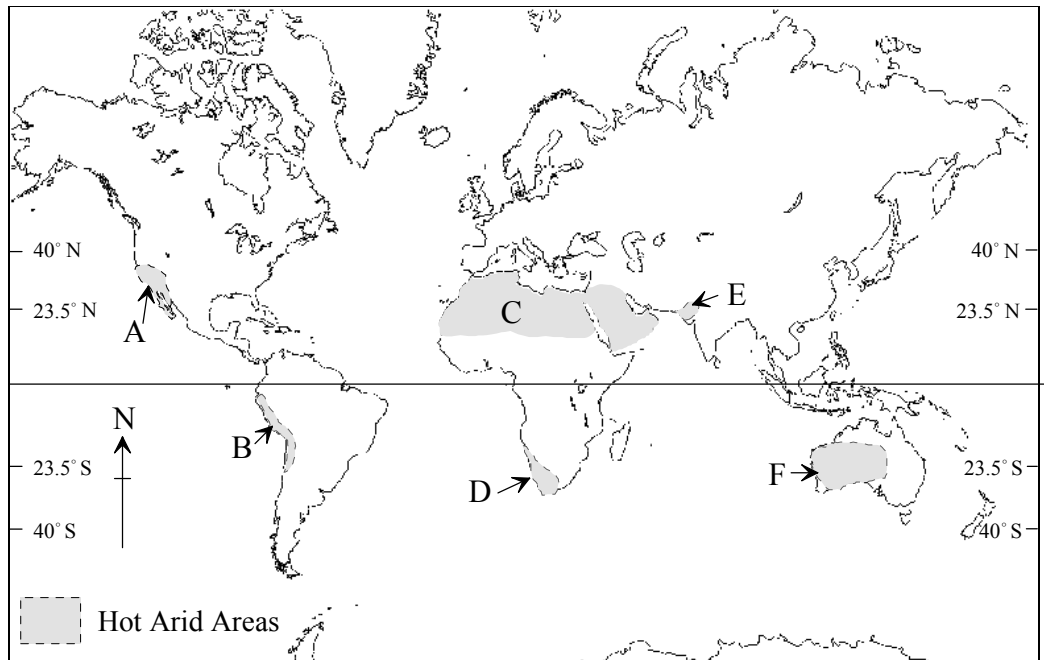
Discuss this statement with reference to desertification.

[20 marks]

Or

(b) Structured question

The map below shows the location of hot arid areas.



- (i) Name any **two** of the arid areas labelled A to F. [2 marks]
- (ii) Describe the world location of hot arid areas shown on the map. [2 marks]
- (iii) One of the causes of aridity is the rainshadow effect. Explain, with the aid of a diagram, how the rainshadow effect contributes to aridity. [6 marks]
- (iv) Distinguish between the effects of aridity and infertility on different land uses in arid areas. [10 marks]

A4. Lithospheric processes and hazards

Either

(a) Essay

“Both the primary and the secondary hazards associated with tectonic activity are more predictable, and therefore less serious, in MEDCs than in LEDCs.”

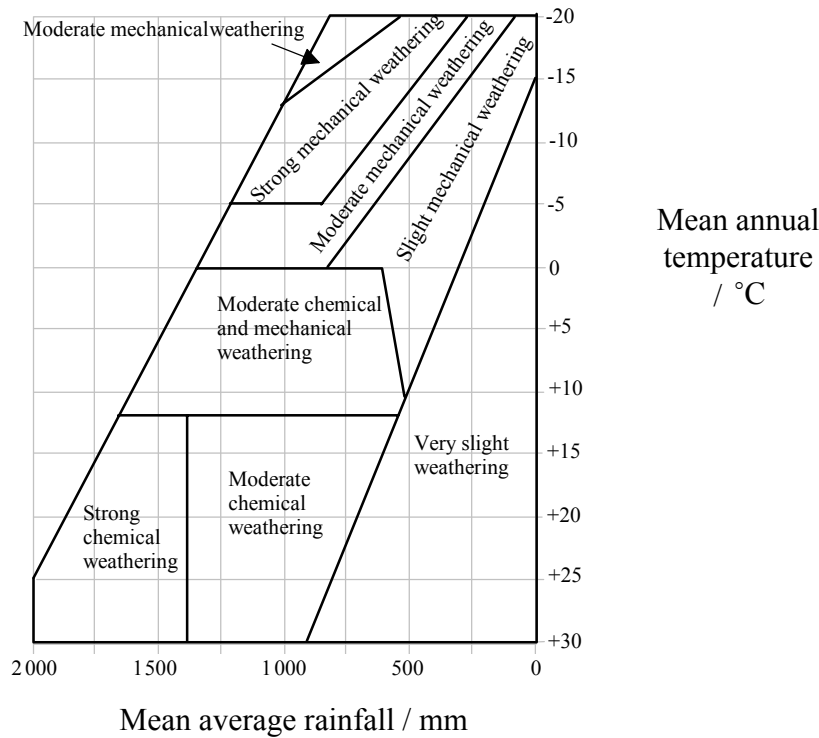
Examine the validity of this statement with reference to **either** earthquakes **or** volcanoes that you have studied.

[20 marks]

Or

(b) Structured question

The diagram shows the relative importance of selected types of weathering in regions with different temperature and rainfall conditions.



[Source: Redrawing of standard diagram]

- (i) Describe how the types of weathering are related to the two climatic variables. [4 marks]
- (ii) Briefly describe **at least four** factors, other than climate, that affect the type or rate of weathering processes. [4 marks]
- (iii) Distinguish how the processes of mass movement differ from processes of weathering. With reference to **at least one** case study, discuss how human activity affects mass movements. [12 marks]

A5. Ecosystems and human activity

Either

(a) Essay

“If ecosystems are to cope with human impact, management and conservation strategies need to be implemented.”

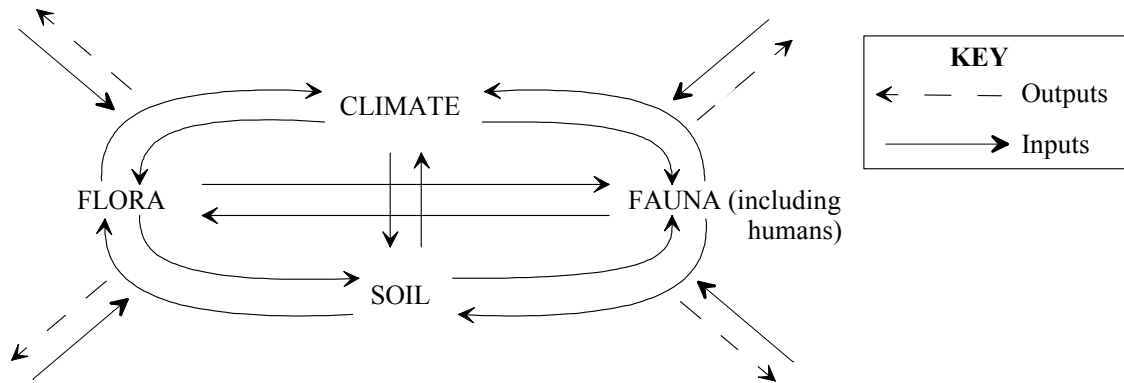
Evaluate this statement with reference to a grassland biome.

[20 marks]

Or

(b) Structured question

The diagram shows interrelationships between components of an ecosystem.



(i) Define the term *ecosystem*.

[2 marks]

(ii) Distinguish between the biotic and abiotic components of the ecosystem.

[2 marks]

(iii) With reference to the above diagram, discuss the concept of dynamic equilibrium.

[4 marks]

(iv) Referring to an ecosystem of your choice, assess the extent to which its vulnerability depends on human activity.

[12 marks]

A6. Climatic hazards and change

Either

(a) Essay

“Human activity modifies the micro-climate of urban areas more than the micro-climate of rural areas.”

Discuss the validity of this statement.

[20 marks]

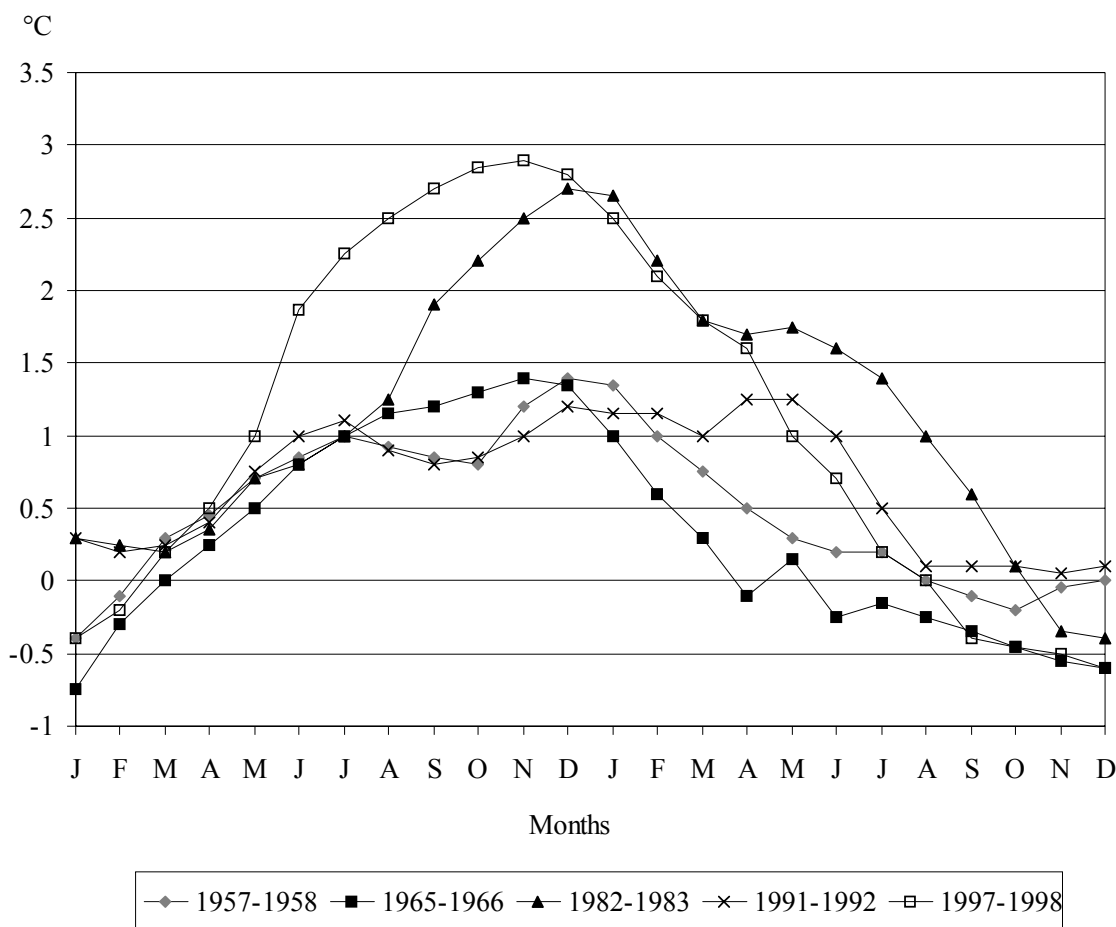
(This question continues on the following page)

(Question A6 continued)

Or

(b) Structured question

The graph shows the monthly departures from the 1961 to 1990 mean temperature in the central eastern Pacific zone. Each series of temperature departures represents an El Niño event.



[Source: Journal of Climate, February 2002]

- (i) Referring to the graph, describe **two** overall trends and **two** anomalous situations. [4 marks]
- (ii) Explain how El Niño southern oscillation (ENSO) occurs. [8 marks]
- (iii) With reference to specific areas of the world, explain how these areas can be affected by an El Niño event. [8 marks]

SECTION B

Answer at least **one** question from this section. If more than one question is selected from this section, each must be taken from a different theme. (Do not answer both an essay and a structured question on the same theme.)

Case studies and examples should be used to illustrate answers and, where appropriate, they should be specifically located. Include well drawn, large, relevant maps, sketches, tables and diagrams as often as applicable.

B7. Contemporary issues in geographical regions

Either

(a) Essay

“Any region falls into one of two categories: it is either a region of success or a region of distress.”

Examine the validity of this statement with reference to any **two** regions that you have studied.

[20 marks]

Or

(b) Structured question

If you choose to answer this question, use the diagram in the Resources Booklet.

The diagram is an attempt to define a local region by examining the relationship between sets of internal and external factors.

(i) Explain why you think that the diagram **either** does **or** does not apply to your local region.

[4 marks]

(ii) Draw a large annotated sketch map of your local region to locate it and to define its boundaries.

[6 marks]

(iii) Identify your chosen region’s contemporary geographical issues and examine the extent to which these issues have been caused by external forces.

[10 marks]

B8. Settlements

Either

(a) Essay

Discuss the population size, population composition and function of the village in rural areas. Explain what the differences might be between villages in the more economically developed world (MEDCs) and the less economically developed world (LEDCs).

[20 marks]

Or

(b) Structured question

If you choose to answer this question refer to the two maps in the Resources Booklet.

The two maps refer to settlements. **Map 1** shows the distribution of settlements of three different sizes. **Map 2** shows urban fields of centres with populations over 40 000.

- (i) Comment on the number and distribution of different order settlements (Central Places) shown on **Map 1**. *[3 marks]*
- (ii) Give **two** reasons why a settlement such as A shown in **Map 2** could have such a large urban field. *[2 marks]*
- (iii) Discuss the ways in which the limits of the sphere of influence of an urban settlement may be determined. *[5 marks]*
- (iv) Analyse why in MEDCs the rural–urban fringe is proving to be more attractive for some retail outlets than CBD locations. Refer to examples. *[10 marks]*

B9. Productive activities: aspects of change

Either

(a) Essay

“Major innovations in agriculture have always proved to be controversial.”

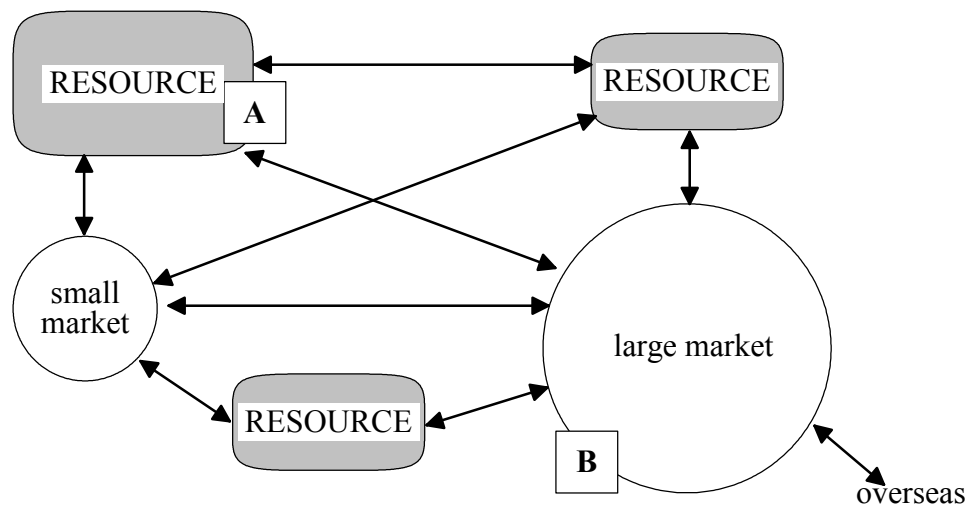
With reference to recent changes in agriculture, evaluate the validity of this statement.

[20 marks]

Or

(b) Structured question

The diagram below shows the relative locations of three different resources, two markets and major transport links. The letters **A** and **B** represent two industrial locations.



- (i) Name an industry that might be located at **A** and justify your choice. [3 marks]
- (ii) Suggest reasons why this industry might wish to relocate to location **B**. [3 marks]
- (iii) Using named examples, explain why an industry decides to relocate to another country. [6 marks]
- (iv) Examine the changing role of women in the non-agricultural workforce. [8 marks]

B10. Globalization

Either

(a) Essay

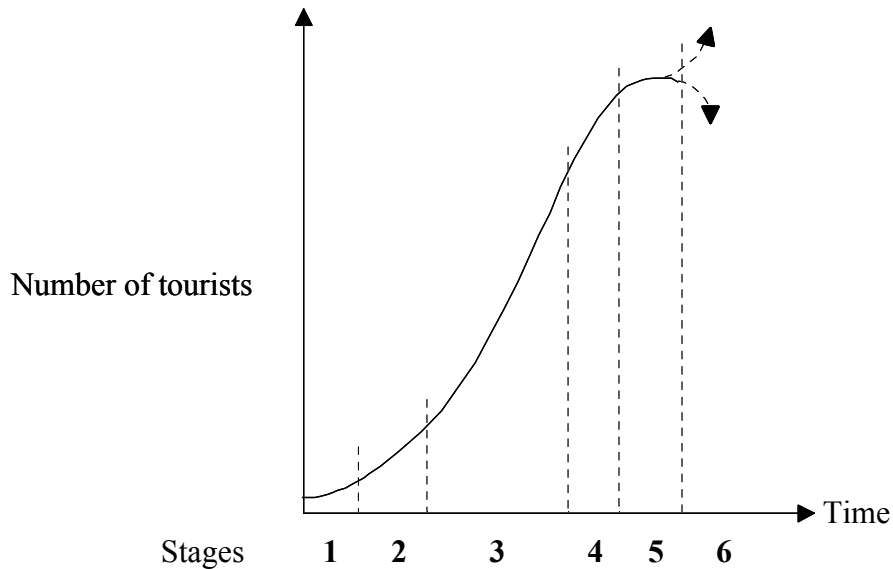
Choose **one** significant economic and **one** significant cultural impact of globalization. Examine how these impacts may be seen as **both** positive and negative.

[20 marks]

Or

(b) Structured question

The graph shows a life cycle model of a tourist resort.



- (i) Suggest appropriate titles for **Stages 2** and **4**. [2 marks]
- (ii) Describe what happens during **Stage 3**. [2 marks]
- (iii) Using examples that you have studied, suggest reasons why some resort areas have declined in popularity. [6 marks]
- (iv) Assess the economic advantages and disadvantages of any tourist resort or destination of your choice. [10 marks]

SECTION C

If you choose to answer this question, use the topographic map extract and the aerial photograph in the Resources Booklet to answer **all** parts.

C11. Topographic mapping

The map extract and aerial photograph show an area around Kingscote, 35.4° S, 137.4° E, (a town with a population of 1 529) on Kangaroo Island. The island lies just off the coast of southern Australia. It has a temperate climate with hot, dry summers and cool, moist winters. The island has an area of 4 350 square kilometres and a population of 4 118. The main land uses are sheep farming, dairy farming, forestry, viticulture, mining, fishing and tourism.

- (a) Determine whether an airplane that requires a runway of 1 600 metres would be able to land safely at Kingscote aerodrome (airport). Give a reason for your answer. [1 mark]
- (b) State the geographical term used to describe the drainage pattern on Mount Marsden (in the north of the extract). [1 mark]
- (c) Name and locate:
- (i) **two** landforms formed by coastal deposition
- (ii) **two** landforms formed by coastal erosion. [4 marks]
- (d) (i) Referring to the aerial photograph of the town of Kingscote, explain why it is not possible to give an accurate scale for the photograph. [2 marks]
- (ii) Draw a labelled sketch map of Kingscote and the surrounding area as shown on the aerial photograph. Clearly mark on it any land uses that are **not** shown on the map extract. [6 marks]
- (e) Select a suitable site to establish a new eco-tourism¹ camping site. Give the grid reference of your chosen location and, using map evidence, justify your choice. [6 marks]

¹ Eco-tourism – nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable
