National
Qualifications
2015

X733/76/11 Geography

THURSDAY, 21 MAY
9:00 AM – 11:15 AM

Total marks — 60

SECTION 1 — PHYSICAL ENVIRONMENTS — 15 marks

Attempt ALL questions.

SECTION 2 — HUMAN ENVIRONMENTS — 15 marks

Attempt ALL questions.

SECTION 3 — GLOBAL ISSUES — 20 marks

Attempt TWO questions.

SECTION 4 — APPLICATION OF GEOGRAPHICAL SKILLS — 10 marks

Attempt the question.

Credit will be given for appropriately labelled sketch maps and diagrams.

Write your answers clearly in the answer booklet provided. In the answer booklet you must clearly identify the question number you are attempting.

Use **blue** or **black** ink.

Before leaving the examination room you must give your answer booklet to the Invigilator; if you do not you may lose all the marks for this paper.

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PB

MARKS

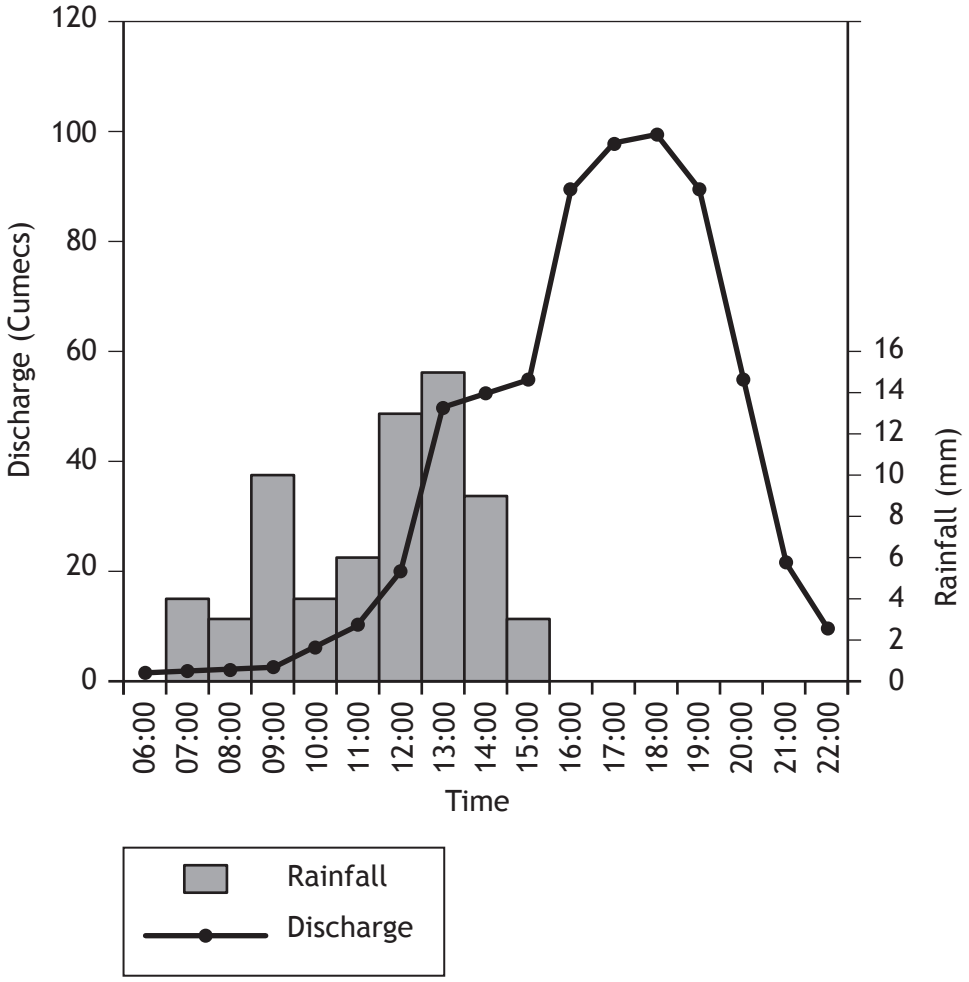
SECTION 1: PHYSICAL ENVIRONMENTS – 15 marks

Attempt ALL questions

Question 1

Study Diagram Q1 before answering this question.

Diagram Q1: Flood Hydrograph for the River Valency at Boscastle, 16 August 2004



Explain the changes in discharge level of the River Valency at Boscastle on 16 August 2004. **4**

MARKS

Question 2

Explain, with the aid of annotated diagrams, the various stages and processes involved in the formation of:

(a) a stack; **and**

(b) a sand spit. **7**

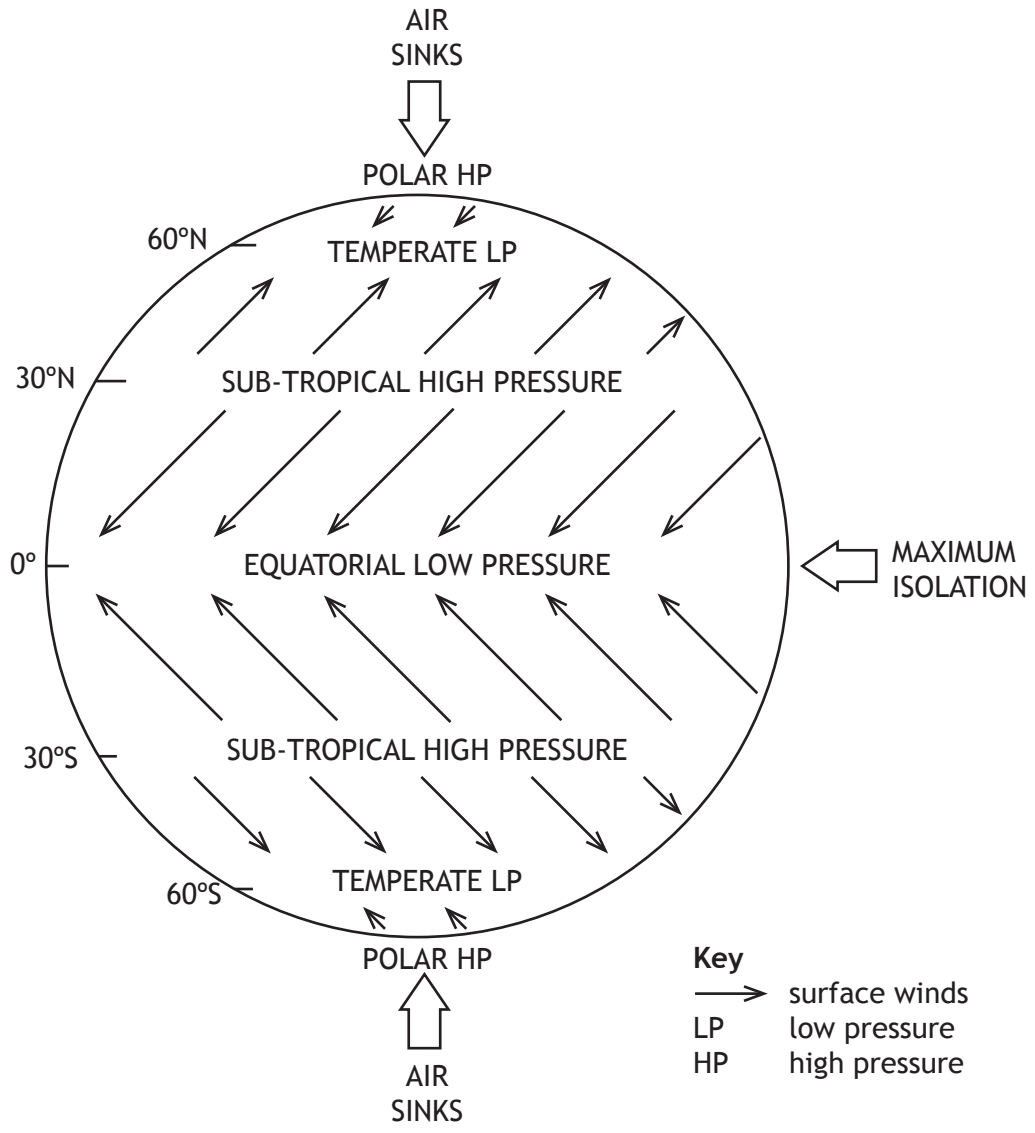
[Turn over

MARKS

Question 3

Look at Diagram Q3 before answering this question.

Diagram Q3: Surface winds and pressure zones



Explain how atmospheric circulation cells and the associated surface winds assist in redistributing energy around the world. **4**

SECTION 2: HUMAN ENVIRONMENTS – 15 marks

Attempt ALL questions

MARKS

Question 4

Study Diagrams Q4A and Q4B before answering this question.

Diagram Q4A: Population Pyramid for Ghana, 2013

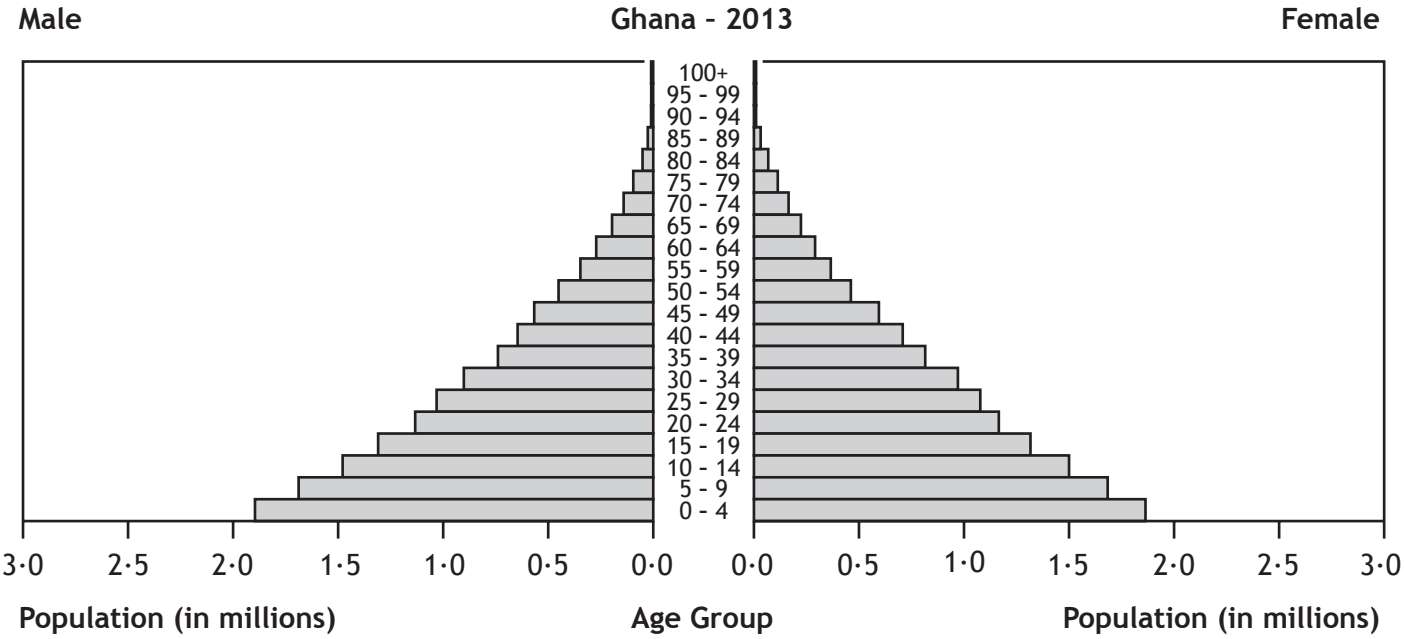
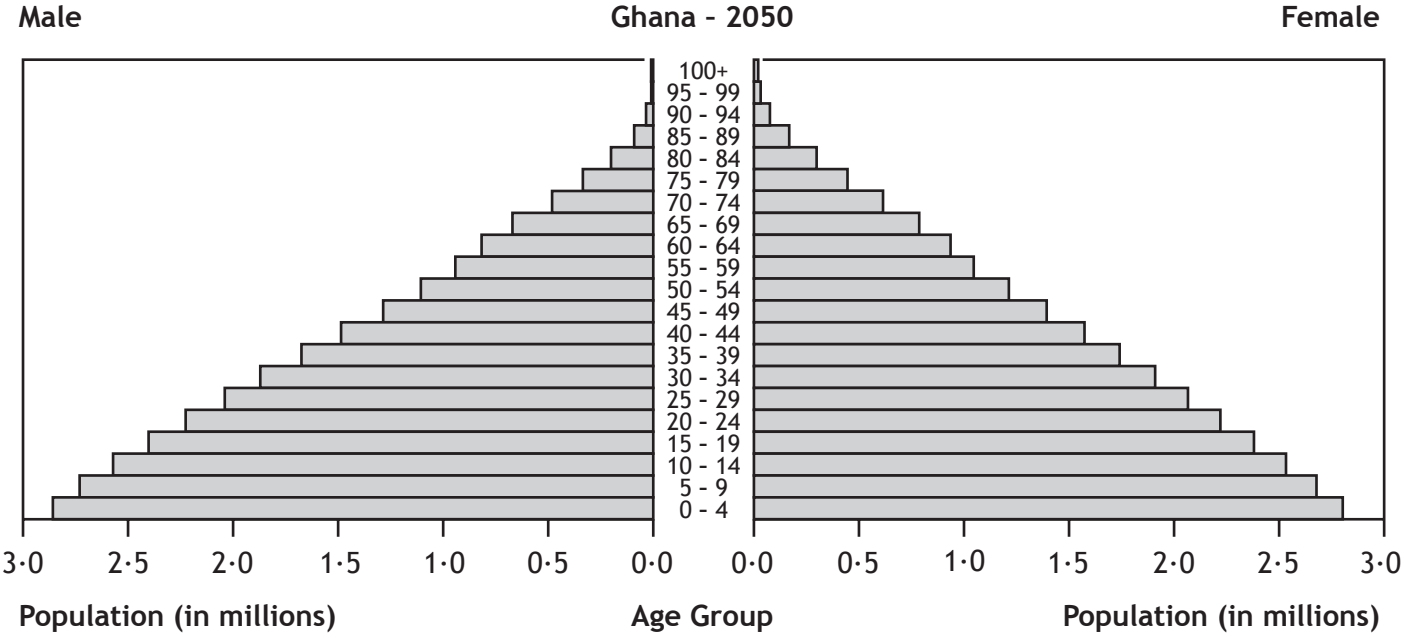


Diagram Q4B: Population Pyramid for Ghana, 2050 (predicted)



Discuss the possible consequences for Ghana of the 2050 population structure. **5**

MARKS

Question 5

Look at Diagram Q5 before answering this question.

Traffic congestion is a major problem in cities in the UK and across the **developed** world.

Diagram Q5: Most congested UK cities, 2013

Rank	City	Congestion trend
1	Belfast	Up
2	Bristol	Level
3	Brighton	Up
4	Edinburgh	Down
5	London	Up
6	Leeds/Bradford	Down
7	Manchester	Up
8	Leicester	Up
9	Sheffield	Up
10	Liverpool	Up

Explain the strategies employed to combat the problems of traffic congestion in a **developed** world city you have studied. You should refer to specific named examples from your chosen city. **5**

MARKS

Question 6

Look at Diagram Q6 before answering this question.

Rapid urbanisation in **developing** world cities has resulted in many housing problems.

Diagram Q6: Photograph of Dharavi Slum, Mumbai, India

Evaluate the impact of strategies employed to manage housing problems in a **developing** world city you have studied. **5**

[Turn over

SECTION 3: GLOBAL ISSUES – 20 marks

Attempt TWO questions

MARKS

Question 7: River Basin Management

(a) **Explain** the human **and** physical factors which need to be considered when selecting a site for a major dam and its associated reservoir. **5**

(b) Referring to a water control project you have studied, **explain** the **positive** social **and** economic impacts created by the construction of a major dam and its associated reservoir. **5**

[Turn over

MARKS

Question 8: Development & Health

Diagram Q8: Development indicators for selected developing countries

Country	Indicators of Development					
	GDP (US $ per capita)	Employment agriculture (%)	Adult literacy (%)	Birth rate (births per 1000)	Life expectancy at birth (in years)	Hospital beds (per 1000)
Mexico	15,400	14	93	18	76	1·7
Brazil	11,700	16	90	15	73	2·3
Cuba	10,200	20	99	10	78	5·1
Kenya	1,800	75	87	30	63	1·4
Malawi	800	90	75	40	53	1·3

(a) Study Diagram Q8 above before answering this question.

In what ways does the information in the table suggest that the five countries are at different levels of development? **4**

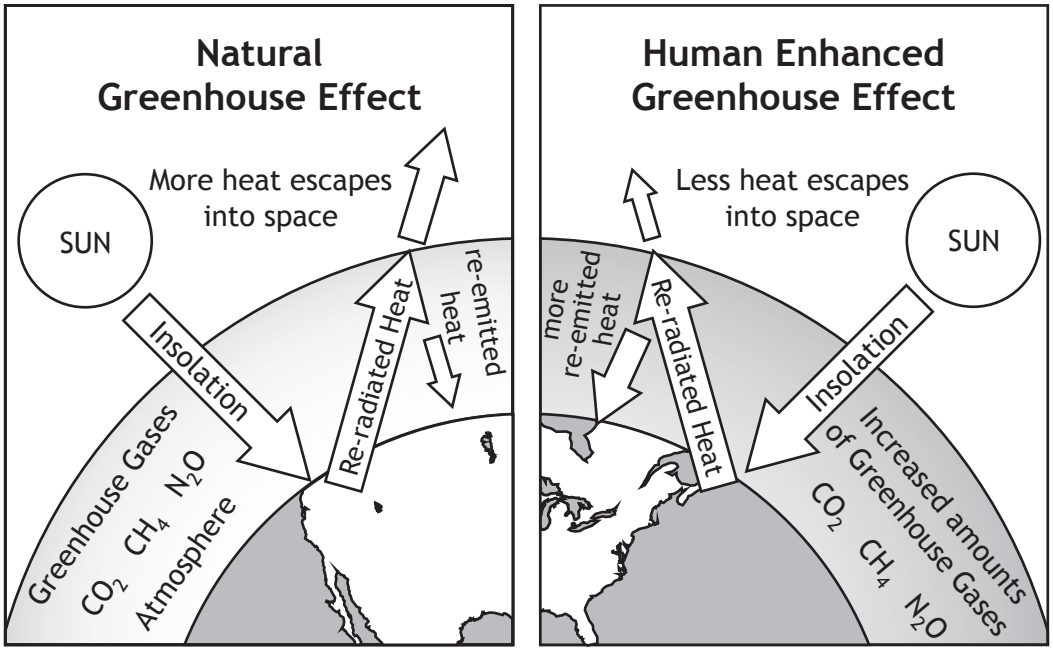
(b) **Suggest reasons** for the wide variations in development which exist between developing countries. You may wish to refer to countries that you have studied. **6**

MARKS

Question 9: Global Climate Change

Look at Diagram Q9.

Diagram Q9: Natural and Enhanced Greenhouse Effect



Many scientists believe that human activity has led to an enhanced greenhouse effect.

(a) **Explain** the human factors that may lead to climate change. **4**

(b) **Discuss** a range of possible effects of climate change. You should support your answer with specific examples. **6**

[Turn over

MARKS

Question 10: Trade, Aid and Geopolitics

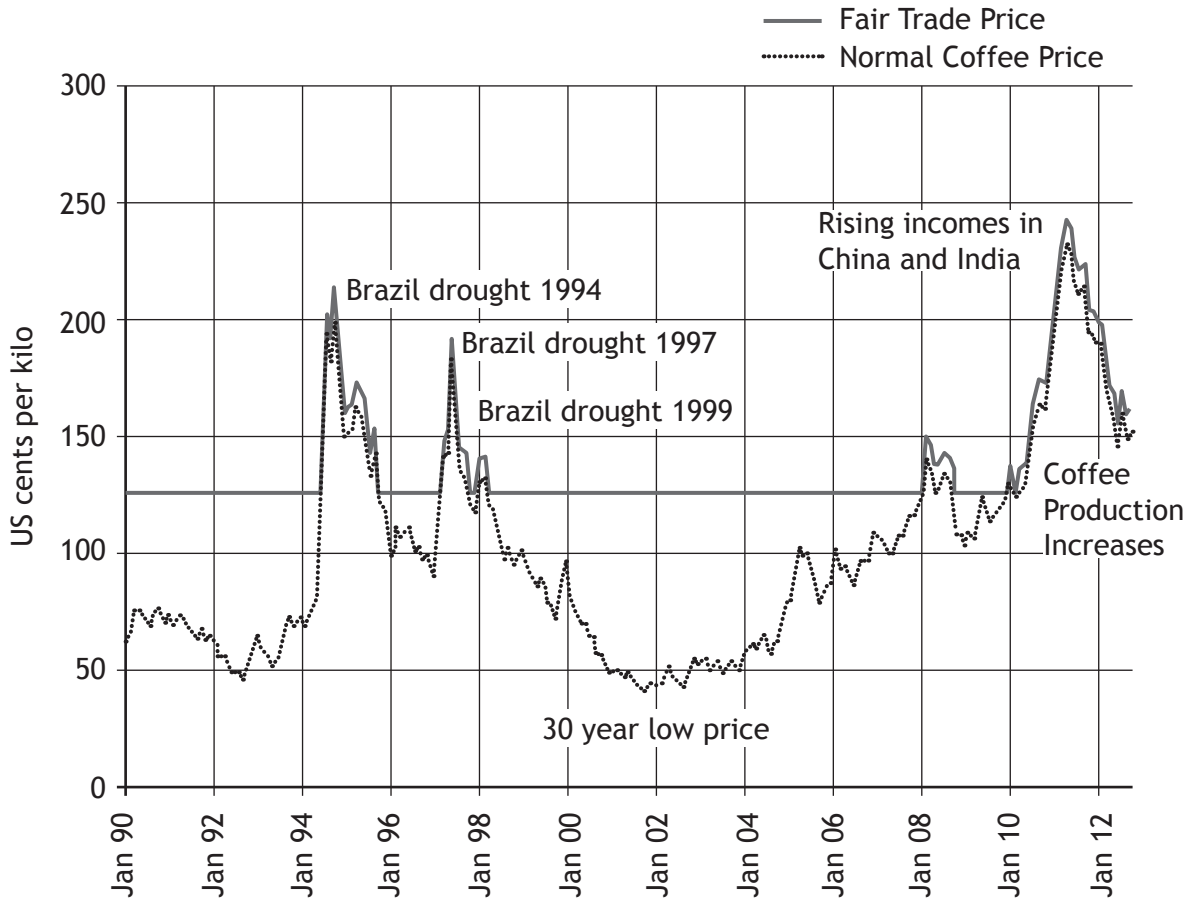
Read the quotation in Diagram Q10a below.

Diagram Q10a: Quotation from Nelson Mandela (22nd November 2000)

> "Where globalisation means, as it so often does, that the rich and powerful now have new means to further enrich and empower themselves at the cost of the poorer and weaker, we have a responsibility to protest in the name of universal freedom."

(a) **Explain** the social and economic impacts of unfair trade on people and countries in the **Developing World**. **4**

Diagram Q10b: Fair Trade and Normal Coffee prices



(b) Study Diagram Q10b.

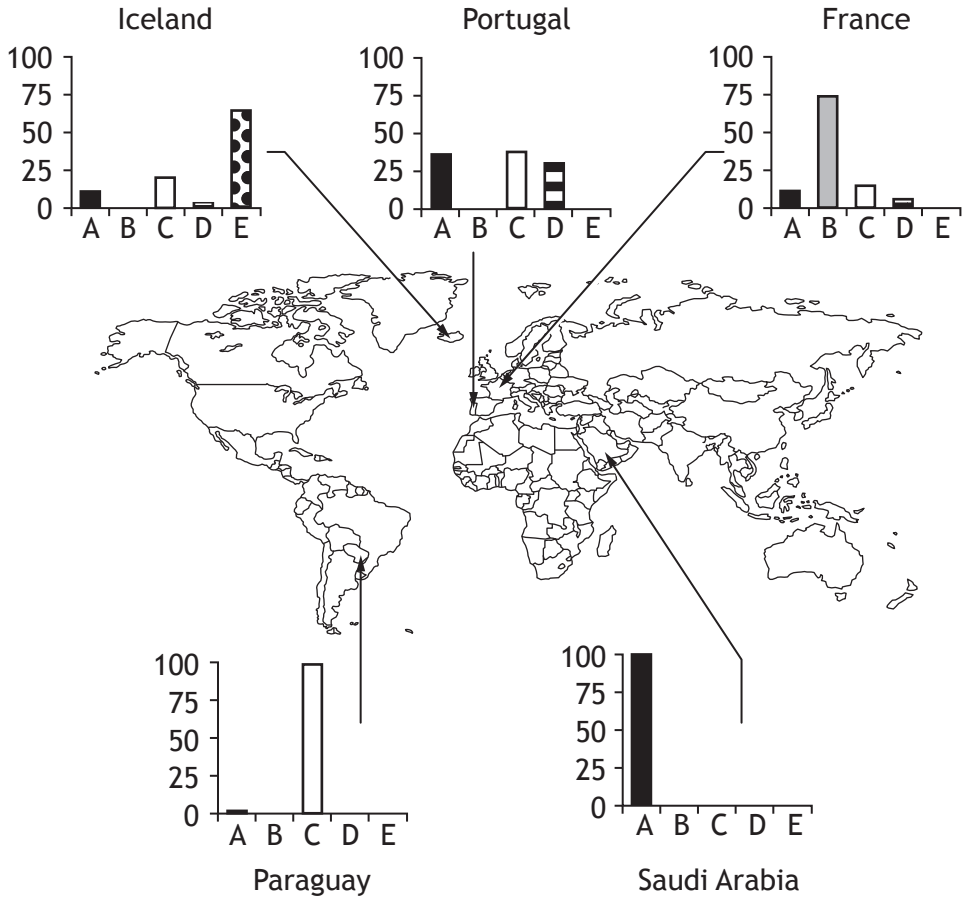
Using the information in Diagram Q10b, and also your knowledge of fair trade, **explain** how fair trade:

(i) helps to reduce inequalities in world trade; and

(ii) impacts on farming communities. **6**

Question 11: Energy

Diagram Q11: % Energy Production in Selected Countries



Key:

A Fossil Fuels (oil, gas and coal)

B Nuclear

C Hydroelectric Power (HEP)

D Other Renewables (solar and wind power)

E Geothermal Power

Study Diagram Q11.

(a) Using the information in the diagram **suggest reasons** for the different patterns of energy production in the countries shown. **4**

(b) Choose **one** renewable *and* **one** non-renewable approach to energy production, and for each approach, **evaluate** its effectiveness in meeting energy demands. **6**

SECTION 4 : APPLICATION OF GEOGRAPHICAL SKILLS – 10 marks

Attempt the question **MARKS**

Question 12

There is a proposal to develop the site at 468057 on the OS Map extract as an Outdoor and Environmental Education centre at Dalmellington, East Ayrshire.

The specifications required for this development are listed below.

Specifications for an Outdoor & Environmental Education Centre:

- offer a range of land-based activities — hillwalking, orienteering, mountain biking and abseiling/rock-climbing
- provide facilities for fishing and water-sports
- allow opportunities for environmental education, fieldwork and conservation in the local area, eg biology and geography studies.

Study Diagram Q12a – Location of Proposed Development; OS Map (Extract 2144/EXP327: Dalmellington), Diagram Q12b, Diagram Q12c, Diagram Q12d and Diagram Q12e before answering this question.

Referring to map evidence from the OS Map extract, and other information from the sources, **discuss**:

(a) the advantages **and** disadvantages of the proposed location; **and**

(b) any possible impacts on the local area and East Ayrshire. **10**

Diagram Q12a : Location of Proposed Development

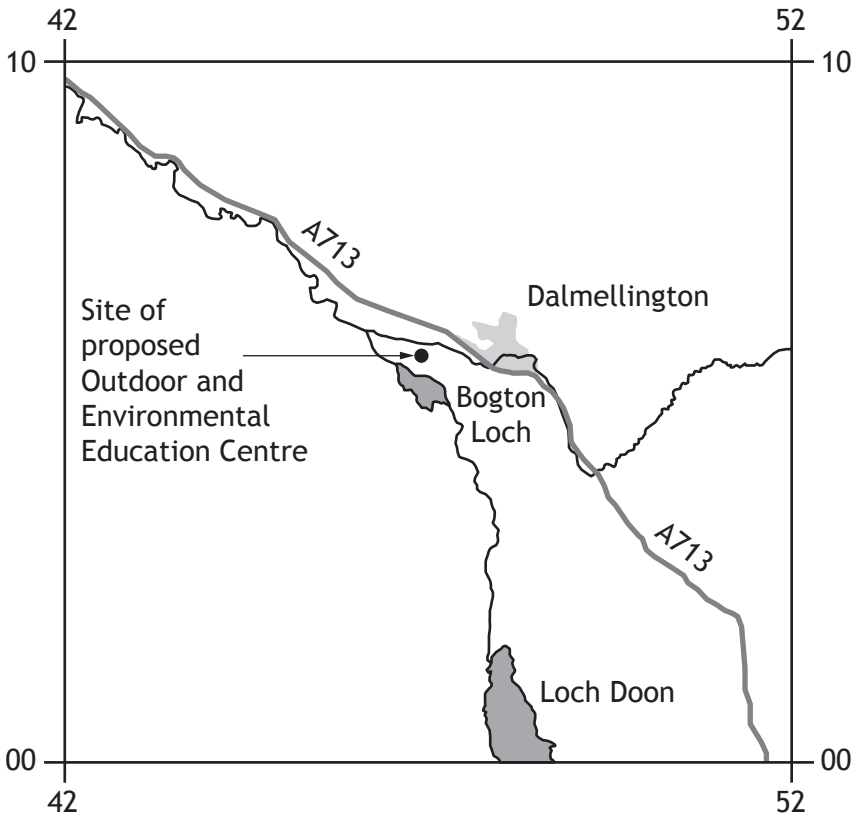


Diagram Q12b : Photograph of Bogton Loch & Dalmellington Moss looking SW from GR 466065

Dalmellington Moss is a Scottish Wildlife Trust Nature Reserve. Rare heathers and moss along with birds such as curlew and snipe can be found here.

Auchenroy Hill

Bogton Loch is a Site of Special Scientific Interest because of the flora and fauna, including water birds, such as Teal and Reed Warblers, the Whooper swan and Greylag goose.

Diagram Q12c: Unemployment rates (%) for East Ayrshire and Scotland, 2008 – 2010

	2008	2009	2010
East Ayrshire	5·6	8·0	9·7
Scotland	4·5	5·9	7·6

Diagram Q12d: Population Change for Dalmellington and Burnton 2001 – 2010

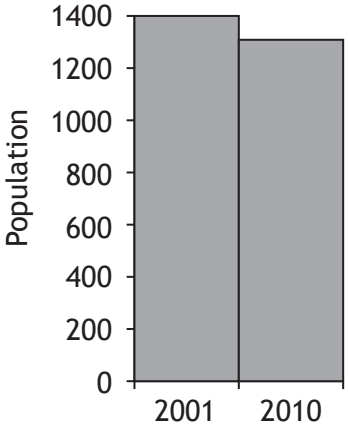
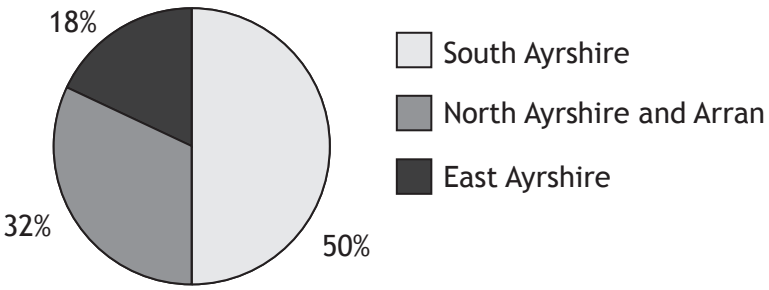


Diagram Q12e: Where tourists spend their money in Ayrshire and Arran



[END OF QUESTION PAPER]

ACKNOWLEDGEMENT

Diagram 6 – gary yim/shutterstock.com

National
Qualifications
2015

X733/76/21

Geography
Ordnance Survey Map

THURSDAY, 21 MAY
9:00 AM – 11:15 AM

ORDNANCE SURVEY MAP

For Question 12

Note: The colours used in the printing of this map extract are indicated in the four little boxes at the top of the map extract. Each box should contain a colour; if any does not, the map is incomplete and should be returned to the Invigilator.

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Ordnance Survey

1:25 000 Scale
Explorer Series

Four colours should appear above; if not then please return to the invigilator.
Four colours should appear above; if not then please return to the invigilator.

Extract No 2144/EXP327

ROADS AND PATHS — Not necessarily rights of way

- M1 or A6(M) — Motorway; Service Area; 7 Junction Number
- A 35 — Dual carriageway
- A 30 — Main road
- B 3074 — Secondary road
- Narrow road with passing places
- Road under construction
- Road generally more than 4 m wide
- Road generally less than 4 m wide
- Other road, drive or track, fenced and unfenced
- Gradient: steeper than 20% (1 in 5); 14% (1 in 7) to 20% (1 in 5)
- Ferry — (V) Vehicle; (P) Passenger
- Path

RAILWAYS

- Multiple track; Single track — Standard gauge
- Narrow gauge or Light Rapid Transit System (LRTS) and station
- Road over; road under; level crossing
- Cutting; tunnel; embankment
- Station, open to passengers; siding

PUBLIC RIGHTS OF WAY — Not shown on maps of Scotland

- Footpath
- Bridleway
- Byway open to all traffic
- Restricted byway

The representation on this map of any other road, track or path is no evidence of the existence of a right of way

OTHER PUBLIC ACCESS

- Other routes with public access
- National Trail / Long Distance Route; Recreational route
- Permitted footpath; Permitted bridleway — See note below

Footpaths and bridleways along which landowners have permitted public use but which are not rights of way. The agreement may be withdrawn.

- Traffic-free cycle route
- 1 National cycle network route number – traffic free
- 1 National cycle network route number – on road

BOUNDARIES

- National
- County (England)
- Unitary Authority (UA), Metropolitan District (Met Dist), London Borough (LB) or District (Scotland & Wales are solely Unitary Authorities)
- Civil Parish (CP) (England) or Community (C) (Wales)
- National Park

HISTORICAL FEATURES

- Site of antiquity
- 1066 — Site of battle (with date)
- VILLA — Roman
- Castle — Non-Roman
- Visible earthwork

Magnetic North; Grid North; True North
Diagrammatic only

GENERAL FEATURES

- Gravel pit; Sand pit
- Other pit or quarry; Landfill site or slag heap
- Slopes
- Place of worship
- Current or former place of worship – with tower – with spire, minaret or dome
- Building; important building
- Glasshouse
- Youth hostel
- Bunkhouse / camping barn / other hostel
- Bus or coach station
- Lighthouse; disused lighthouse;
- Beacon
- Triangulation pillar
- Mast
- Windmill; with or without sails
- Wind pump; wind turbine
- pylon, pole — Electricity transmission line
- BP — Boundary post
- BS — Boundary stone
- CH — Clubhouse
- FB — Footbridge
- MP; MS — Milepost; milestone
- Mon — Monument
- PO — Post office
- Pol Sta — Police station
- Sch — School
- TH — Town Hall
- NTL — Normal tidal limit
- + W; Spr — Well; spring

HEIGHTS AND NATURAL FEATURES

- 52 — Ground survey height
- 284 — Air survey height

Surface heights are to the nearest metre above mean sea level. Where two heights are shown, the first height is to the base of the triangulation pillar and the second (in brackets) to the highest natural point of the hill

Vertical face/cliff; 75; 60; 50
Boulders; Loose rock; Outcrop; Scree

- Water; mud
- Sand; sand and shingle

ACCESS LAND (England & Wales)

- Access land boundary and tint
- Access land in wooded area
- Access information point
- MANAGED ACCESS — Access permitted within managed controls, for example, local byelaws

Portrayal of access land on this map is intended as a guide to land which is normally available for access on foot, for example access land created under the Countryside and Rights of Way Act 2000, and land managed by the National Trust, Forestry Commission and Woodland Trust.

Access for other activities may also exist. Some restrictions will apply; some land will be excluded from open access rights.

The depiction of rights of access does not imply or express any warranty as to its accuracy or completeness. Observe local signs and follow the Countryside Code.

VEGETATION

Vegetation limits are defined by positioning of symbols

- Coniferous trees
- Non-coniferous trees
- Coppice
- Orchard
- Scrub
- Bracken, heath or rough grassland
- Marsh, reeds or saltings

ACCESS LAND (Scotland)

- Land open to the public by permission of the owners. The agreement may be withdrawn.
- National Trust for Scotland Property; always open
- National Trust for Scotland Property; limited access – observe local signs
- Forestry Commission Land
- Woodland Trust Land

In Scotland, everyone has access rights in law over most land and inland water, provided access is exercised responsibly (Land Reform [Scotland] Act 2003). **This includes walking, cycling, horse-riding and water access, for recreational and educational purposes, and for crossing land or water.** Access rights do not apply to motorised activities, hunting, shooting or fishing, nor if your dog is not under proper control.

OTHER ACCESS

- DANGER AREA — Firing and test ranges in the area. Danger! Observe warning notices

TOURIST AND LEISURE INFORMATION

- Building of historic interest
- Cadw (Welsh heritage)
- Camp site
- Caravan site
- Camping and caravan site
- Castle / fort
- Cathedral / Abbey
- Country park
- Cycle trail
- English Heritage property
- Fishing
- Forestry Commission visitor centre
- Garden / arboretum
- Golf course or links
- Information centre
- Information centre, seasonal
- Horse riding
- Museum
- Nature reserve
- National Trust property
- Other tourist feature
- P — Parking
- P&R — Park and ride, all year / seasonal
- Picnic site
- Preserved railway
- PC — Public Convenience
- Public house/s
- Recreation / leisure / sports centre
- Slipway
- Telephone (public / motoring organisation / emergency)
- Theme / pleasure park
- Viewpoint
- V — Visitor centre
- Walks / trails
- Water activites
- World Heritage site or area

Scale 1: 25 000

1 — 0 Kilometres — 1
1 — ¾ — ½ — ¼ — 0 Miles — 1

1 kilometre = 0·6214 mile; 4 centimetres to 1 kilometre (one grid square); 1 Mile = 1·6093 kilometres