

GCE

Edexcel GCE

Geography A (6462)

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Mark Scheme (Results)

Section A

1. a. Study Figure 1 which shows the age structure of the rural and urban populations of England in 2002.

i. Calculate the dependency ratio for England as a whole (show your workings). 2

$$\text{Dependency Ratio} = (18.6 + 15.9) / (12.4 + 29.2 + 23.9) = 0.527$$

2 marks for correct answer (Allow range 0.52 to 0.53) or 52% to 53%

Give one mark for correct method but gets wrong answer.

ii. Compare the age structure for England's rural and urban populations. 3

- urban is younger
- rural is older
- the "turning point" occurs at 45
- the least significant difference is for the 1-14 cohort
- 25-44 and 45-64 differ significantly
- uses data

Point mark.

iii. Suggest reasons for these differences. 3

These are structure differences, not overall numbers

- Inward migration of retirees to countryside because of favourable climate, friendly, etc.
- Inward migration of young to cities for work, entertainment, university etc.
- High house prices are pushing families without enough bedrooms out of cities, hence higher numbers in forties
- High proportion aged 45-64 in rural areas have financial means to commute or may telework.

3	Two processes described with basic reasoning provided for at least one of these.
2-1	Describes one process with reasoning (probably movement of retirees), or two processes stated.

b. Describe the economic costs and benefits of a youthful population structure. 4

Description only: explanation is not asked for
 Must be economic - do not credit drift into social costs (shanty town squalor, famine etc).

- Public-funded costs may include: schools, sport and recreation grounds, subsidised health (including immunisation) and transport.
- Costs may be passed onto families (from clothing to tuition fees).
- Benefits include nurturing of a large labour force, possibly attracting inward investment.
- "people are the ultimate resource"

3-4	Describes one cost and one benefit more fully (with details of both for 4 marks); or has a wider range of shorter ideas (well-balanced for 4 marks)
2-1	One cost / benefit with some detail, or states a couple

c. With reference to population models and/or theories, describe their strengths and weaknesses in explaining changes in total population size. 8

- The emphasis should be upon whether our understanding of why real-world changes occur is actually helped by theories or models.
- Models/theories specifically referred to in 6462 specification: DTM, Malthus, Boserup.
- Perhaps expect some familiarity with: Meadows (aka Club of Rome / Limits to Growth), Julian Simon.
- Accept "underpopulation" and "overpopulation" as theories.
- Accept migration models in this context.
- Accept cumulative causation in this context (Myrdal)
- The "unpredictable" decision-making of the Chinese may feature.
- Accept the "positive" view that the DTM is partly based on UK data, so one would expect it to fit the facts.
- Accept the "negative" view that the DTM is blind to the effects of World Wars, secularisation and the onset of "Stage 5", so only partially explains changes in the UK.
- Migration is a cause of change that is absent in the models.
- Examples not asked for - answer can be purely theoretical (e.g. an account of how the DTM does not actually *explain* change).

8-7	Clearly recognises the strengths and weaknesses of a single theory/model or can contrast the usefulness of two theory/models. Strong focus on explaining changes in population size. Uses convincing real-world detail to support arguments or has a good grasp of the limits of models.
6-4	Asserts that real-life changes in population numbers mostly conform (or don't) with a recognisable model or theory. Has better supporting evidence or may touch on the idea of a theoretical debate at the top of this band.
3-1	A free-standing description of some population changes. May not actually identify a model or theory.

2. a. Study Figure 2 which shows changes in Sweden's birth and death rates.
- i. Calculate the rate of natural increase in 1855 (show your workings). 2
- 10 per 1000 per year or 1% per annum
- accept "10" or 1%
 - allow range 9-11 or 0.9 to 1.1%
 - right method (CBR-CDR), wrong answer: 1 mark
- ii. State the year when Sweden experienced its greatest rate of natural increase. 1
- 1861 (allow 1859-1863)
- iii. Suggest one possible economic reason why the birth rate rises between 1835 and 1860 2
- Boom time / period of growth or climbing wages, so confidence rises
 - Time of economic recovery (after war/famine/disease/recession)
 - A succession of good harvests for sale, so earlier marriage
 - Some answers will contradict the "text-book" DTM, with CBR initially rising at onset of industrialisation: this approach is ok
- For 2 marks: the economic reason should be clear and the link with fertility should be explicit or easily inferred.*
- iv Explain why birth and death rates are not the only cause of population change. 2
- Migration
- One mark for the word ("migration"). Second mark may be an extension, such as an example; of recognition of direction of change (immigration / emigration / net changes).

b. Compare the reasons for changing death rates in LEDCs with those in MEDCs.

5

Most will probably argue Crude Death Rate (CDR) is currently falling in both, but more rapidly in LEDCs:

- LEDCs: now experiencing improved food supply (green revolution, transport networks, etc.)
- LEDCs: now improving medicine, especially immunisation, vaccines.
- LEDCs: now improving hygiene and education.
- MEDCs: already very low CDR. Different areas of concern compared with LEDCs e.g. Alzheimer's, prostate cancer.
- MEDCs: risk-averse society - highly effective regulation of all aspects of health and safety e.g. anti-smoking, drink-driving campaigns, smoke alarms.
- MEDCs: flood prevention schemes, better hazard management, etc.
- May stress that there are similarities - such as worldwide eradication of smallpox

Some will recognise the CDR is not always falling: Europe's rising DR due to ageing population structure; CDR fluctuates due to HIV in Africa, civil war in Rwanda, poor diet in some strata of US society.

5-4	Both LEDC and MEDC addressed and some detail of changes provided. <i>Does not have to recognise CDR sometimes rises if details of falling CDRs are good and distinction is made.</i>
3-1	One or two generic statements about why CDR is falling (LEDC/MEDC may not be specified) or ignores changes altogether ("MEDC is low, LEDC is high"). Expect some MEDC/LEDC distinction to begin to appear at 3 marks.

- c. Explain how physical and human factors have influenced the distribution and density of population in the UK.

This is a relatively straightforward question. The best answers will have good supporting detail and will be well balanced between physical and human factors. These will be explicitly linked to both density and distribution in the upper band. May take a national view or may have a more localised approach.

8-7	Well balanced answer that explains how a range of physical and human factors have influenced one or more aspects of both distribution and density.
6-4	Both human and physical addressed, although do not expect balance or great accuracy at the bottom of this level. Uses data and locational detail. Distinction between distribution and density may still be indistinct at this level but may have different scales of analysis to offer.
3-1	Lacks any balance between human and physical. Minimal use of examples. Density & distribution not understood.

3 a State three pieces of evidence that indicate there is a need for town centre redevelopment. 3

- Lack of pedestrians
- Lack of traffic
- Empty shops for sale / rent
- Road needs repairing
- Drab appearance
- Not yet pedestrianised

Three separate points should be presented that avoid repetition of ideas.

b With reference to town-centre redevelopment schemes in MEDCs, describe their possible: 3

i. economic advantages;

- Reduces residents' travel costs for work/leisure ("compact cities")
- Renovation of existing stock may be cheaper than Greenfield newbuild
- Creates new jobs, directly & indirectly (supplier services)
- Attracts affluent residents / shoppers - greater consumer spending, hence new 'Metro' stores, etc.
- Raises property prices in gentrified areas

Accept both CBD and Inner City ("Docklands") as focus. One mark for each legitimate point or extension or example. Give three marks for just one idea if the economic benefit is clearly explained and some useful detail is provided.

ii disadvantages for the resident population. 3

- Benefits may accrue to incomers, not original residents (London Docklands), especially with escalating house-prices after late 1990s
- Residents could be moved / relocated by councils
- Poorer groups in rented sector forced to move elsewhere, as rents rise
- Some useful services (launderettes, etc.) may be lost, if CBD functional emphasis shifts to wine-bars / entertainment
- Rise in near-24-hour drinking in many rejuvenated town centres - increasing drunkenness, violence, emergency services over-stretched
- Area could become more polluted

Accept both CBD and Inner City ("Docklands") as focus. One mark for each legitimate point or extension / example. Give three marks for just one idea if social consequences for the residents are sensibly argued, clearly explained and some detail is provided.

c Describe and explain the distribution of different types of residential land use within LEDC cities. 4

- Shanties / spontaneous settlement on edges / near industry / along roads / city centre (City of the Dead)
- Higher class closer to CBD than in MEDC - may still coincide with old 'Colonial' areas
- Physical factors may come into play - poorer housing on steep slopes, higher class on terraces, etc.
- NIC cities (Seoul, Sao Paulo) will exhibit greater range of types (linked to much wider income gap) than non-industrialised African cities (Freetown, Addis Ababa)
- Credit South Africa - Apartheid city

The best answers will begin to recognise complexity within individual cities or may draw contrasts between different countries and cities

4-3	Must recognise the <i>distribution of different</i> types for this level (two types, with at least one explained for full marks)
2-1	Describes, but does not explain at all, or else offers a very basic explanation of a single type, probably "shanties at edges for newly arrived migrants"

d i Define the term peak land value. 1

Site of maximum land values within the CBD or city / area / similar.

ii With the use of examples, describe and explain the relationship between patterns of land use and land values in urban areas. 6

- Bid-rent theory shows how land values generate functional zoning.
- Accessible sites have the highest values.
- Variations occur in broad concentric zones, but also in accordance with major transport routes. Both rings and sectors can be linked with land values and the potential for profit that accessible sites offer.
- Microscale patterns may be examined (e.g. proximity to underground stations in London house market influences land values and distribution of richer / poorer housing).
- Land values only partly explain land use patterns. Physical features impinge (floodplains and high relief areas). The importance of governance may also be alluded to, and at different scales e.g. Dept. PM's Office, Local Councils, gov. agencies such as Environment Agency or English Heritage.

6-5	Describes and explains the key ideas and illustrates with specific details.
4-3	Attempts to make links between different types of activity and the cost of land. Recognisable location.
2-1	Description of an urban area. Most expensive area may be identified

4 a Study Figure 4 which shows the population sizes of market towns in England.

i Describe the relationship between settlement numbers and population size. 2

- The greater the population size, the fewer the number of settlements
- More than half of the total / very high numbers are found in the first category
- The greatest drop in numbers occurs between first and second groups
- There is no consistent ratio between numbers in consecutive groups (K idea)
- Uses data

Point mark

ii Describe and explain how the largest and smallest market towns might differ in terms of the goods and services they offer. 4

- Total number of services present increases in line with settlement threshold
- Presence of high-order services (including transport terminals) in larger settlements
- Different classes of service function - larger settlements may develop leisure or tourist services in addition to basic retail
- Some smaller CBDs may have recently lost services to retail parks

4-3	Describes some differences and attempts to explain. For full marks, displays appropriate understanding that draws on the concept of a settlement hierarchy or range / threshold / catchment
2-1	Asserts the presence or lack of some services.

b Compare the outer suburbs of LEDC and MEDC cities in terms of their residential characteristics. 4

The emphasis is upon comparing, and not explaining.

'Characteristics' can be the people living there or ideas about lay-out / population density / housing construction. *The best answers will recognise the diversity of residential characteristics found in at least one type of city.*

- LEDCs: generally poorer people & housing / less services
 - MEDCs: generally more affluent people / housing types
 - MEDCs: also lower-class / council-housing / tower-blocks
 - Some LEDC cities, especially in south-east Asia, are beginning to witness suburbanisation of more affluent groups
 - Non-economic residential characteristics might include age-sex and ethnicity - credit sensible suggestions (as with Apartheid city)
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4-3	Offers a fuller account of rich/poor divide, using good details. For full marks, has a wider interpretation of "characteristics" or recognises that this is an over-simplification
2-1	LEDC = poor, MEDC = rich. No variety offered, only offers an outline / single criterion

c i Describe how site factors may influence the pattern of settlement expansion. 4

- Constraints include high relief, poor drainage, rivers and coastlines
- Low relief, good drainage may encourage sprawl
- Site factors might encourage outward growth of particular land uses e.g. docks along eastern Thames
- Constraints may be overcome in time (e.g. bridges over Thames)

Point mark each idea and any extension / example, but limit a list of generic constraints or physical advantages to max. three marks. For 4 marks, idea of pattern / direction of expansion should be there

ii With reference to a named city, describe how recent changes in function have altered its characteristics. 6

- Cleaner.
- Characteristics can include: size, shape, land use patterns, socio-economic characteristics, population size, population density, architectural/visual appearance, amongst others.
- Accept 'problems' such as rising unemployment in 'hollowed-out' towns that have lost retail functions as a characteristic - but unlikely to be a top-band response on its own
- Emphasis may be placed upon changes occurring in older areas (CBD and Inner City) or urban fringes.
- Good answers should convey a clear sense of "before" and "after"

6-5	Describes more than one changing characteristic, clearly brought about by functional changes. Convincing locational detail.
4-3	Functional changes in an identifiable urban area are described that have altered the nature of the settlement.
2-1	Description of a growing urban area.

- 5 a Study Figure 5 which shows percentages of rural, urban and inner city residents reporting anti-social behaviour in their neighbourhood. 3
- i state which type of anti-social behaviour 3
1. is most frequently reported in both inner city and rural areas
- Graffiti and vandalism
2. shows the greatest percentage difference between inner city and rural areas in the percentages reported
- Litter & rubbish
3. shows the greatest percentage difference between suburban and rural areas in the percentages reported.
- Litter and rubbish
- ii Suggest reasons why inner city residents may not migrate to rural areas, even though lower rates of anti-social behaviour are lower there. 4
- Stay with job
 - Choose to remain with friends and family
 - Cannot afford removal costs
 - Cannot afford to buy housing elsewhere (especially if currently renting / council housing)
 - Not bothered by anti-social behaviour (may even be partaking in it)
 - Benefits of inner city (amenities, entertainment, employment opportunities) thus outweigh various "pulls" of the rural
- Point mark each idea. For full marks, answer should include some acknowledgement that benefits of moving must be weighed against costs, as part of a decision-making process.*
- b Describe and explain the positive impacts that urban-rural migration can have on rural areas. 4
- Economic: migrants may become employers (e.g. opening hotels), may hire labour (gardeners), may help local shops meet their thresholds.
 - Social: incoming children into classrooms
 - Cultural: incomers often very active with societies, running charity events, etc.
 - Infrastructure: professional incomers are often effective lobbyists, e.g. bringing broadband to rural areas
 - Must be positive
- Point mark each idea and extension / e.g. (for full marks, one point should be extended.)*

c Explain why the gravity model is of limited use when attempting to predict actual movements of people. 3

- Characteristics of places the people live in and their accessibility need to be taken into account
- Characteristics of people (wealth, political freedom) need to be known, not just their numbers
- Models simplify reality and are unlikely to make accurate predictions
- Migrations can be forced
- Models assume people behave in the same way, ignoring individual variability
- Models assume people always act rationally, e.g. as optimisers, not satisficers
- Transport has changed

One mark for any valid point and second mark for each extension / example. For full marks, answers must clearly address the specifics of the gravity model.

d With reference to named examples, describe how the motives for migrating into and out of a country or a region have varied over time. 6

Can be international or internal, but emphasis must be upon motivations.

Middle band answers may well focus on the strength of a single motivation ebbing and flowing as circumstances change ("people flee the volcano and then return", for instance). Upper band answers are more likely to identify some variety of differing motives for emigration and immigration operating over time.

Themes may include:

- Phases of economic growth bring demand for guest workers
- Families may follow guest workers
- Recession / depression may cause out-migration
- Natural hazards or persecution can result in exodus
- Germany likely to feature: refugees leaving during 1930s and early 1940s (so motive is "search for safe haven"); Turks arriving thereafter (so motive is "improved job prospects")
- Northern England may feature: industrialisation and deindustrialisation
- Urbanisation vs. counterurbanisation over time for a settlement

6-5	Changing motivations for migration are explained. For full marks, answers should use e.gs of in- and out-migration, or changing direction.
4-3	Superficial treatment of an inward and outward migration or fuller treatment of one direction that is clearly linked to motivation.
2-1	One or two simple descriptions of movement.

6 a Study Figure 6 which shows how migration changed the size of the Black population in the US between 1995 and 2000.

i Describe the pattern shown. 3

- Much of the US remains unchanged
- Interior states in particular are unchanging
- The western half is unchanging, with two 'anomalies' (one positive, one negative)
- Most changes are occurring to the eastern half, particularly along the coast
- Changes are occurring along many parts of the southern coast
- The northeast corner shows a clustering of losses
- Elsewhere, regions of loss often adjoin regions of gain

Point mark. *For full marks, must do more than simply name states, and can recognise regional trends (or the lack of them)*

ii Suggest possible reasons why some states experienced net out-migration of Black Americans. 3

- Jobs lost
- Jobs found elsewhere (may be linked to emergence of black middle-class)
- Migrants returning to families
- Accept discrimination / hostility within some states
- Returning to previously hostile states following civil rights advancement
- Accept sensible suggestion of emigration
- Accept generic climatic reasons

Point mark each idea and extension / e.g.

b Describe and explain the main characteristics and motives of migrants moving: 4 + 4

- (i) within LEDCs;
- (ii) between MEDCs.

The question asks for explanation, not just description.

Characteristics = age, sex, ethnicity, income, selective or non-selective

Motive = employment, family, fleeing danger / persecution

Weaker candidates may simply assert that 'young poor males' move 'for work' in both parts of the question, but will not always be able to fully justify this, especially in part (ii) where poorer men (and women!) are actually less likely to migrate internationally than richer, skilled types who will find it easier to gain a visa.

4	At least one characteristics and one motive. Explains a scenario that is clearly significant.
3-1	Some legitimate characteristics or motives for migration

	asserted, must have both for three marks
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c With reference to named examples, explain how changes in the physical environment can be both a cause and consequence of migration.

6

- Accept short-duration 'changes' e.g. hazards
- Longer-term changes include global warming (or cooling in the distant past, creating land bridges)
- environmental consequences of shanty town growth (air or water quality; deforestation)
- environmental consequences of MEDC urban sprawl (hydrological and ecological change)
- environmental consequences of counterurbanisation (4x4s and air pollution, off-road erosion, etc.)
- Refugee camps lead to deteriorating environment e.g. Sudan

For the top band, check that consequences are clearly linked with the process of migration, if urban growth is the focus.

6-5	Addresses both causes and consequences with convincing account of migratory circumstances.
4-3	Superficial description of both, or may explain either causes or consequences. Do not explain balance if location is recognisable.
2-1	One or two simple statements, probably omitting either cause or consequence / no changes.