

Unit 1

Physical and human geography

Core human topic

Chapter 5 Population change (page 199)

Question 1

Section (a)

(i) 1970: 34 per 1,000

1990: 22 per 1,000

Mark scheme

One mark for each correct answer with a tolerance of ± 2 .

(ii) The stages of the demographic transition model for Mexico are:

- stage 2 in 1950 — birth rate high, death rate much lower
- stage 3 in 2000 — birth rate has fallen since 1950, death rate is very low

Mark scheme

One mark for each correct stage; extra mark for evidence, describing birth rates and death rates or natural increase in the 2 years.

(iii) Reasons for the natural increase in 1950 include:

- The natural increase (31 per 1,000) was high because the country was less economically developed then.
- Families were large for various reasons, including lack of family planning and economic necessity.
- The death rate (16 per 1,000) had started to fall because of improvements in medical care, nutrition etc.

By 2000:

- The natural increase was much lower, at 18 per 1,000.
- The birth rate had fallen dramatically because:
 - the need for children to work had decreased
 - contraception was available
 - religion had become less important in society
 - the status of women had improved
- The death rate had continued to fall because of continued improvements in the standard of living, health and nutrition and/or the fact that a high percentage of the population was young.
- The greatest natural increase (35 per 1,000) had occurred in 1960.

Mark scheme

Level 1 One or two basic reasons linked to birth and/or death rates. Natural increase is referred to only indirectly. (1–4 marks)

Level 2 Natural increase is referred to clearly and more than two of the bullet points are covered. (5–6 marks)

Section (b)

Fertility The number of live births per 1,000 women aged 15–49 in 1 year. It is also defined as the average number of children each woman in a population will bear. If this number is 2.1 or higher, a population will replace itself.

Infant mortality The number of deaths of children under the age of 1 year expressed per 1,000 live births per year.

Mark scheme

2 marks for each term to a maximum of 4 marks.

Section (c)

There are a number of reasons why population change might not follow the demographic transition model:

- The model has been described as Eurocentric — it assumes that all countries around the world will follow the same four stages as European countries.
- It assumes that industrialisation will accompany development. It seems unlikely that some of the poorest African countries will ever industrialise.
- The decline in the death rate in stage 2, which is linked to improvements in nutrition and medical advances, happened spontaneously in developed countries over a period of time, as new inventions were implemented. Developing countries have been given this knowledge and medical advances, and their death rates have declined more rapidly. At present, they are at lower levels than ever experienced in the earlier stages in the developed world. This has also resulted in higher rates of natural increase than seen in developed countries.
- In certain countries, such as those in sub-Saharan Africa, birth rates are at a much higher level than they ever were in Europe. High birth rates are generally due to cultural factors such as religion.
- In some countries, for example those in southeast Asia, the timescale of the transition from stages 1 to 4 has been much reduced. The model covers a period of time well in excess of 100 years. In such NICs, birth rates have fallen rapidly due to government policy (e.g. the one-child policy in China, the availability of contraception).
- The model fails to account for changes in population size due to migration.

Mark scheme

Level 1 The answer lacks focus and either provides a description of the demographic transition model or might explain why birth rates remain high in many developing countries. (1–6 marks)

Level 2 One of the bullet points is covered clearly or a couple are briefly outlined; the use of place will not be specific. The comments made would apply to any country of a similar type. (7–12 marks)

Level 3 Two or more of the bullet points are covered, showing a more detailed understanding of the demographic transition model itself and its application to a relevant country. (13–15 marks)

Question 2

Section (a)

- (i) The advantages of using a percentage scale are that:
- it makes international comparisons easier
 - it makes changes over time more obvious
 - because the same scale is used, population structure can be observed more easily between places and times

Mark scheme

One mark for each of the bullet points above, up to the maximum of 2 marks.

(ii) Ways in which the population structure is expected to change include:

- an increase in the number of elderly dependants, i.e. people over the age of 65 years
- an increase in the number of young dependants, i.e. people under the age of 15 years
- an increase in the number of economically active people

Mark scheme

Award 1 mark for each of the bullet points above.

Note Answers must relate to age groups, not individual bands. The figures on the pyramids are raw numbers, but candidates would not be penalised for using percentages (or proportions) in their responses.

(iii) Reasons why the changes will occur are:

- an increase in the number of elderly people is due to improvements in living standards/healthcare between 2000 and 2050
- an increase in the number of youngsters is due to either higher birth rates or a reduction in infant mortality rates
- an increase in those of working age is due to high birth rates in previous years and decreases in infant mortality rates

These changes reflect improvements in economic development. They indicate movement from stage 2 towards stage 3 of the demographic transition model.

Mark scheme

Level 1 Basic explanation is provided relating to one change in the population structure, most likely the elderly. (1–3 marks)

Level 2 A clear response, which covers at least two sectors of the population age structure. (4–5 marks)

Section (b)

Impacts that emigration can have on an area include:

- the younger adult age groups (20–34) migrate, leaving behind an older population
- males are more likely to migrate, causing an indentation on that side of the population pyramid
- birth rates will fall and death rates will rise

Mark scheme

Level 1 Simple listing of impacts with development of none. No sophistication in the account; generalised points only. (1–3 marks)

Level 2 Some development of at least one impact, which may offer sophisticated comment or some degree of exemplification. (4–5 marks)

Section (c)

Refugees are categorised as those who seek safety in a country other than that of their birth.

Refugee migrations may occur because of environmental push factors, such as earthquakes, volcanic eruptions, floods, drought and hurricanes. These movements are generally temporary — people tend to move short distances to shelter and return home when it is safe.

Migrations are also linked to human push factors, such as war and racial, political and religious persecution. Although war may cause temporary displacement, the other migrations might be more permanent.

Mark scheme

Level 1 Reasons for migration will be outlined but there will be a mixture of push and pull factors, and little distinction will be made between the two. Support will be lacking. For 5–6 marks, one push factor will be covered reasonably well. Some answers at this level will confuse economic migrants with refugees. (1–6 marks)

Level 2 An answer can be awarded a Level 2 mark if it describes pull factors, so long as the treatment of push factors is satisfactory. A limited range of factors influencing refugee movement will be covered and support will be limited. (7–12 marks)

Level 3 The answer will be well focused and there will be a good range of examples offered. There may be an attempt to identify the relative importance of factors responsible for forced migrations, and this might include reference to pull factors. At the top of the level the quality of communication and the use of geographical terminology will be very good. (13–15 marks)

Question 3

Section (a)

Burnden has:

- lower population overall
- fewer white people (25% fewer)
- more Asian and black people (significantly more Asian)
- fewer managerial and self-employed people (one third of the managerial)
- more routine occupations and unemployed/never worked (almost four times the latter)

Mark scheme

Level 1 Simple listing and identification of differences. No description of any differences. (1–3 marks)

Level 2 Description of at least two differences (as given in brackets in the bullet points above). (4–5 marks)

Section (b)

Other differences could be in terms of:

- educational attainment
- housing types and ownership
- quality of housing
- ownership of cars/vehicles
- access to healthcare facilities
- crime levels

Mark scheme

Level 1 Simple listing and identification of possible differences. No description of any differences. (1–3 marks)

Level 2 Description/elaboration of at least two differences. (4–5 marks)

Section (c)

A census is useful to national governments for the following reasons:

- It records trends over the previous 10 years, which can be projected forward to enable planning in a range of social services.
- It helps to predict natural population change and migration patterns.
- It enables national housing demands to be estimated.
- It enables planning of national transport demands.
- It provides a snapshot of the diversity of the country.

Mark scheme

Level 1 Simple listing of uses with development of none. No sophistication in the account; generalised points only. (1–3 marks)

Level 2 Some development of at least one use, which may offer sophisticated comment or some degree of exemplification. (4–5 marks)

Section (d)

This will very much depend on the nature of the areas identified. Candidates will be expected to write in detail about the precise nature of the areas they have named. The initial starting point therefore will be giving the names of the areas. The general impacts that could arise are as follows.

- Age structure:
 - more elderly — more care homes, residential homes, adapted housing; greater provision of support services, e.g. meals on wheels
 - more young — new housing area perhaps leading to expansion of primary school; toddlers' groups; pressure on providing youth groups for all ages
- Ethnicity:
 - demand for language experts to assist with translation services
 - specialised religious facilities, e.g. mosques, converted churches
 - need for more teaching assistants in primary schools
- Wealth and employment:
 - more private provision of health and education facilities in areas of higher income
 - greater provision of extended schooling for more deprived areas
 - development of academy schools in lower-income areas
 - more job centres in areas of higher unemployment

Mark scheme

Level 1 The answer lacks focus and discusses general impacts that could apply to any area of the UK. Comparison between two areas is not evident as the differences are not clearly identified. (1–6 marks)

Level 2 One of the criteria is covered clearly or a couple are briefly outlined. The specific sense of place is patchy. (7–12 marks)

Level 3 Two or more of the criteria are covered well, showing a more detailed understanding of their impacts on the provision of services. A specific sense of place is consistent throughout the answer. (13–15 marks)