Solutions

Marking: **K** knowledge, **App** application to the case, **An** analysis (a developed chain of reasoning), **Ev** evaluation (a justified judgement); calculations earn **M1** for the method and **A1** for the answer.

Each answer shows the steps, then the **result**.

2.1

- $30 - 10 = 20$ per 1000
- $=$ **2** % a year

2.2

- $50\,000 - 80\,000 = -30\,000$
- net **emigration** of 30 000: it **reduces** the population

2.3

- a narrow base: a **low birth rate** (1)
- wide upper bars: many **older** people, a low death rate / long life expectancy (1)
- so an **ageing** population with a high dependency on fewer workers (1)

3.1

B

3.2

(a)

- $60 \times (0.21 - 0.14)$ million
- $=$ **4.2 million** more people

(b) two reasons, each explained (K + App each):

- better **health care** and diet: longer life expectancy, lower death rate
- a **low birth rate**: children are costly; women in education and work; contraception
- fewer children each year, so the old form a larger share

(c) a developed chain, for example:

- more people draw **state pensions** (K)
- more spending on **health care** and elderly care (App)
- fewer people of working age pay **income tax** (An)
- so spending rises while tax revenue falls: the budget **deficit** grows (An)
- the government must raise taxes, borrow, cut other spending or raise the retirement age (An)

(d) for immigration: (An)

- young workers pay **tax** and fill jobs at once; they lower the dependency ratio

against: (An)

- immigrants also grow old; pressure on housing and services; possible social tension
- other options: raise the **retirement age**, encourage private pensions, support families to have children, use machines

judgement: (Ev) for example, immigration helps quickly but is not enough alone; combined with a later retirement age, it spreads the cost fairly between generations.

Level 3 (6–8): both sides analysed and a justified judgement. Level 2 (3–5): one side analysed or both explained. Level 1 (1–2): simple points.