Answers to Questions for Review

25. 1 Country A might have access to better technology, its workers might put in more hours, and its workers might have higher human capital.

25.2 Country C may have no population growth while D has some; for example, the countries might share the $pf$ shown in Figure 25.3, but D has to use some investment for capital widening so it has $k_1$ capital per worker while C has $k_0$. Alternatively, the population of both countries might be growing, but D’s is growing faster. Another possibility is that C has a higher saving ratio; for example, the countries might share the $pf$ shown in Figure 25.4, but D has the saving and investment line $s_1, i_1$, with capital per worker $k_1$, while C has the line $i_0, s_0$ and capital per worker $k_0$.

25.3 Country E may have less than the equilibrium amount of capital, so that capital per worker and output per worker are both rising. It might have less than the equilibrium amount of capital because there has been a recent one-off rise in its workforce or in its saving ratio, or a recent one-off rise in working hours, human capital or technology that has shifted its production function into the present position. Alternatively, E might have the equilibrium amount of capital, but might have an ever-rising population, so that GDP is rising, even though output per worker is not.

25.4 No, the results would not be the same as in the neoclassical model. Admittedly, any event which increased capital per worker in the neoclassical model would have a larger impact on output per worker if the production function shifted upwards. But if
output per worker rose less than proportionally to capital per worker, then sustained increases in capital per worker would have progressively less and less effect on output per worker, as assumed in the neoclassical model. In turn, the country’s capital per worker would reach a ceiling, so that there was no further growth in output per worker: this ceiling would arise when any increase in the capital per worker would lead to such a small rise in the output and income per worker that saving and investment would rise by less than the extra depreciation, so causing capital per worker to drop back again.