Production and Growth

Answer 1: d.   See chapter 7, section 3 for a detailed discussion of the policies.

Answer 2: b.   Real GDP per person in respective years was

$$\frac{16,800,000}{2,800} = 6000, \quad \text{and} \quad \frac{15,390,000}{2,700} = 5700.$$

Therefore the growth rate of real GDP per person was

$$\frac{5700 - 6000}{6000} = -5\%.$$

Answer 3: b.   In the long run, wages (and thus standard of living) is determined by worker productivity.

Answer 4: d.

Country A: $RGDP = 600 \times 8 \times 2.5 = 12000$ output $\implies$ $\frac{12000}{1000} = 12.0$ output per person,

Country B: $RGDP = 560 \times 8 \times 3.0 = 13440$ output $\implies$ $\frac{13440}{800} = 16.8$ output per person.

So we can see country B has higher real GDP and higher real GDP per person.

Answer 5: a.   To shamelessly ripoff a sentence from the book, "The term human capital usually refers to education, but it can also be used to describe another type of investment in people: expenditures that lead to a healthier population. "

Answer 6: d.   Some have predicted that the price of resources would increase over time as we ran out of them. But as technology does more with less, we don't need to use as many resources to produce the same things, so prices of resources generally have not risen.

Answer 7: b.   As each worker gets more capital to work with, they output more. But each new piece of capital increases output by less than the previous piece. Giving a worker one computer helps a lot. Giving a worker a second computer will help still, but not by as much as the first. Giving a worker a third computer will still help, but not as much as the second. And so on and so forth. In other words, there are *diminishing marginal returns to capital.*

Answer 8: c.   If you draw the production function from problem 7, the logic is that the the more developed country will be on the flatter part of the curve, whereas the poorer country will be on the steeper part of the curve. Thus, the poorer country will get a bigger boost from one more capital per worker.

Savings, Investment, and the Market for Loanable Funds

Answer 9: d.   In other words, its purpose is to take excess funds and funnel them into productive endeavors. You can think of it as taking scarce resources from savers (excess funds) to borrowers (those who wish to invest).

Answer 10: b. The store needs to gather funds elsewhere. To do so, it essentially borrows from the public by selling bonds—this is sometimes referred to as *issuing debt* or *debt finance.*

Answer 11: a. In general, things that make an investment sound desirable come with a lower interest rate; and things that make an investment sound less attractive come with a higher interest rate. The idea is that you need to entice investors to buy an otherwise unattractive bond by offering a higher return.

Answer 12: a. To again shameless ripoff material from the book,

> "The most famous stock index is the Dow Jones Industrial Average, which has been computed regularly since 1896. It is now based on the prices of the stocks of thirty major U.S. companies, such as General Electric, Microsoft, Coca-Cola, Boeing, Apple, and Wal-Mart. Another well-known stock index is the Standard & Poors 500 Index, which is based on the prices of the stocks of 500 major companies."

Answer 13: b. Using some identities, we have

$$\text{Public Saving} = T - G,$$

$$\text{Private Saving} = Y - T - C$$

$$= (C + I + G) - T - C$$

$$= I + G - T$$

$$= I - (T - G).$$

I'll use Δ as the symbol for "the change in." We are told that $\Delta[T - G] = -2b$. Therefore we can conclude that $\Delta[I - (T - G)] = \Delta I + 2b$. Since we are told that private saving falls by $1b$, we can therefore conclude that

$$\Delta I + 2b = -1b \quad \implies \quad \Delta I = -3b.$$

Answer 14: c. Remember that in macro, stocks and bonds are considered *finance*, whereas investment is activity intended to increase the capital stock.

Answer 15: b. The real interest rate determines how much borrowers will end up paying back *in real terms*, and consequently is the interest rate firms are interested in when making the cost-benefit decision of investing.

Answer 16: b. Think of the real interest rate as the price of borrowing. When the price of borrowing falls, firms will borrow and invest more, meaning they will demand a larger quantity of loanable funds.