1. The production function \( y = f(k) \) means:
A) labor is not a factor of production.
B) output per worker is a function of labor productivity.
C) output per worker is a function of capital per worker.
D) the production function exhibits increasing returns to scale.

2. Two economies are identical except that the level of capital per worker is higher in Highland than in Lowland. The production functions in both economies exhibit diminishing marginal product of capital. An extra unit of capital per worker increases output per worker:
A) more in Highland.
B) more in Lowland.
C) by the same amount in Highland and Lowland.
D) in Highland, but not in Lowland.

3. The consumption function in the Solow model assumes that society saves a:
A) constant proportion of income.
B) smaller proportion of income as it becomes richer.
C) larger proportion of income as it becomes richer.
D) larger proportion of income when the interest rate is higher.

4. In the Solow growth model of Chapter 7, where \( s \) is the saving rate, \( y \) is output per worker, and \( i \) is investment per worker, consumption per worker \( c \) equals:
A) \( sy \).
B) \( (1 - s)y \).
C) \( (1 + s)y \).
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C) \( (1 + s)y \).
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5. If capital lasts an average of 25 years, the depreciation rate is ______ percent per year.
   A) 25   B) 5   C) 4   D) 2.5

6. The steady-state level of capital occurs when the change in the capital stock ($\Delta k$) equals:
   A) 0.   B) the saving rate.   C) the depreciation rate.   D) the population growth rate.

7. In the Solow growth model of an economy with no population growth and no technological progress, the higher the steady capital-per-worker ratio, the higher the steady-state:
   A) growth rate of total output.   B) level of total output.   C) growth rate of output per worker.   D) level of output per worker.

8. If the per-worker production function is given by $y = k^{1/2}$, the saving ratio is 0.2, and the depreciation rate is 0.1, then the steady-state ratio of output per worker ($y$) is:

9. If the national saving rate increases, the:
   A) economy will grow at a faster rate forever.   B) capital-labor ratio will increase forever.
   C) economy will grow at a faster rate until a new, higher, steady-state capital-labor ratio is reached.
   D) capital-labor ratio will eventually decline.
5. If capital lasts an average of 25 years, the depreciation rate is _____ percent per year.
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\[ \frac{1}{25} = 0.04 \]

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D) capital-labor ratio will eventually decline.
10. Assume two economies are identical in every way except that one has a higher saving rate. According to the Solow growth model, in the steady state the country with the higher saving rate will have ______ level of total output and ______ rate of growth of output per worker as/than the country with the lower saving rate.
A) the same; the same  B) the same; a higher  C)a higher; the same  D) a higher; a higher

11. The Golden Rule level of capital accumulation is the steady state with the highest level of:
A) output per worker.  B) capital per worker.
C) savings per worker.  D) consumption per worker.

12. The Golden Rule level of the steady-state capital stock:
A) will be reached automatically if the saving rate remains constant over a long period of time.
B) will be reached automatically if each person saves enough to provide for his or her retirement.
C) implies a choice of a particular saving rate.
D) should be avoided by an enlightened government.

13. To determine whether an economy is operating at its Golden Rule level of capital stock, a policymaker must determine the steady-state saving rate that produces the:
A) largest MPK.  B) smallest depreciation rate.
C) largest consumption per worker.  D) largest output per worker.

14. When an economy begins below the Golden Rule, reaching the Golden Rule:
A) produces lower consumption at all times in the future.
B) produces higher consumption at all times in the future.
C) requires initially reducing consumption to increase consumption in the future.
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A) higher; the same  B) higher; a higher  C) lower; the same  D) lower; a lower

16. In the Solow growth model of an economy with population growth but no technological progress, in the Golden Rule steady state, the marginal product of capital minus the rate of depreciation equals:
A) 0.  B) the population growth rate.  C) the saving rate.  D) output per worker.

17. According to Kremer, large populations:
A) require the capital stock to be spread thinly, thereby reducing living standards.
B) place great strains on an economy's productive resources, resulting in perpetual poverty.
C) are a prerequisite for technological advance and higher living standards.
D) are not a factor in determining living standards.

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