HE2002 Intermediate Macroeconomics Quiz 2: Version 1

Instructions:

- Do the following 15 single-choice questions in 60 minutes.
- Each question is equally weighted.
- Please make sure to write down your name, matric number and version number in the bubble sheet.

1. Which of the following production functions is both constant return to scale and decreasomg return to K/N:

(a) $F(K, N) = K + 2N$

(b) $F(K, N) = 2 * K^{1/3} N^{2/3}$

(c) none of above

(d) both of above

2. Assume that every month the average student in Japan and the average student in China buy the quantities and pay the prices indicated in the following table. Using the

	Food		Transportation Services	
	Price	Quantity	Price	Quantity
Japan	500	50	100	100
China	RMB15	50	RMB3	30

PPP method and Japanese prices, the ratio of living standard in China to that in Japan is:

(a) 0.9

(b) 0.8

(c) 0.75

(d) none of these

3. Assume production function takes form $F(K, N) = K + 2N$. Successive and equal increases in capital per worker will cause which of the following to occur?

(a) Output per worker will not change.

(b) Output per worker will increase by a constant amount.

(c) Output per worker will increase by a larger amount.

(d) none of these

4. Which of the following will cause a increase in output per worker in the long run?

(a) technological progress

(b) capital accumulation

(c) an increase in the number of workers

(d) faster capital depreciation rate

(e) none of these

5. Assume that a country experiences a permanent reduction in its saving rate. Which of the following will occur as a result of this reduction in the saving rate?

(a) a permanently slower growth rate of output

(b) no permanent effect on the level of output per capita

(c) a permanently lower level of output per worker

(d) a permamently slower growth rate of output but no permanent effect on the level of output per capita

6. Suppose the stock of capital increases by 2% and employment increases by 2%. Given this information, we know that

(a) output per capita will increase by 6%.

(b) output will increase by 4%.

(c) output per capita will increase by less than 4% and more than 2%.

(d) none of these

7. When steady state capital per worker is above the golden-rule level, we know with certainty that an increase in the saving rate will

(a) increase consumption in both the short run and the long run.

(b) decrease consumption in both the short run and the long run.

(c) decrease consumption in the short run, and increase it in the long run.

(d) increase consumption in the short run, and decrease it in the long run.

(e) none of these

8. Assume that an economy experiences both positive population growth and technological progress. Once the economy has achieved balanced growth, we know that the output per effective worker ratio (Y/NA) is

(a) growing at a rate of 0.

(b) growing at a rate of gA + gN.

(c) growing at a rate of gN.

(d) growing at a rate of gA.

(e) none of these

9. Which of the following factor does NOT determine how much investment is required to maintain a given level of capital per effective worker:

(a) population growth

(b) given level of capital per effective worker

(c) technological progress

(d) depreciation rate

(e) the above all matter

10. Consider an economy without technological progress and population growth. The production function is given as $Y = K^{1/4}N^{3/4}$. Both the saving rate and the capital depreciation rate are assumed to be 0.1. The steady state output per worker is:

(a) 0.5

(b) 1.0

(c) 1.5

(d) none of above is correct

11. Consider an economy without technological progress and population growth. The production function is given as $Y = K^{1/3}N^{2/3}$. The capital depreciation rate are assumed to be 0.1. Which of the following saving rate delivers the highest consumption per worker in the steady-state:

(a) 1/3

(b) 1/2

(c) 2/3

(d) none of above is correct

12. Assume that the current one-year rate is 4% and the yield to maturity on a two-year bond is 6%. Given this information, the one-year rate expected one year from now is

(a) 2%.

(b) 4%.

(c) 6%.

(d) 8%.

(e) none of above is correct.

13. Consider an economy without technological progress and population growth. The production function is given as $Y = K^{1/3}N^{2/3}$. Both the saving rate and the capital depreciation rate are assumed to be 0.1. Suppose the economy is initially in its steady state, and the depreciation rate increases permanently from 0.1 to 0.2 starting from period t(i.e.,$\delta_j = 0.2$ for $j \geq t$). The capital per worker in t and $t+1$ are:

(a) 1 and 0.9

(b) 1 and 0.8

(c) 0.5 and 0.4

(d) none of above is correct

14. Consider an economy without technological progress and population growth. The production function is given as $Y = K^{1/2}N^{1/2}$. Both the saving rate and the capital depreciation rate are assumed to be 0.1. Suppose the economy is initially in its steady state, and the saving rate declines from 0.1 in period t to 0.09 in $t+1$(i.e., $s_t = 0.1$, $s_j = 0.09$, for $j \geq t+1$). The capital per worker in $t+1$ and $t+2$ are:

(a) 0.9 and 0.91

(b) 1 and 1.1

(c) 1 and 1.01

(d) none of above is correct

15. Consider a three-year bond with a face value of 50. The risk premium is assumed to be 5%. The interest rate is 5%, 8% and 12% in the first, second and third year, respectively. The present discounted value of the bond is closest to:

(a) 30

(b) 36

(c) 40

(d) none of above is correct