2017/18 summer exam EC100 answer keys

Section A

1. C
2. B
3. B
4. D
5. C
6. C
7. B
8. B
9. B
10. B
11. D
12. D
13. D
14. B
15. B

B16. (a) Banks' three main functions are:

(1) identifying profitable lending opportunities
(2) transform short term liabilities into long term assets (maturity transformation)
(3) manage risk through diversification.

During the crisis

(1) The subprime market brought in risky borrowers, who defaulted when house prices collapsed.
(2) Through the shadow banking system, the long-term loans (mortgages) were packaged and sold to other financial institutions, financed by short-term lending from money markets. (Risk management). Risk was not well diversified due to the existence of systemic risk that kicked in along with the housing crisis.
(3) Maturity mismatch between short-term financing and long-term underlying loans arose. (Maturity transformation)

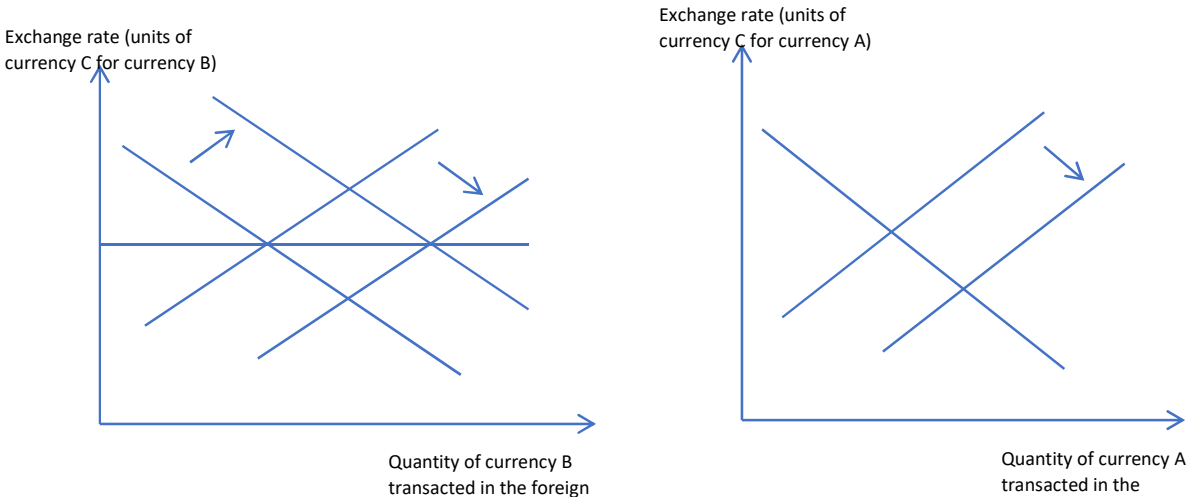
(b) Depositors are insured by the government up to some level, but beyond that they may lose their deposit if their banks become insolvent. When one bank becomes insolvent this may harm other banks and financial institutions through the inter-bank loans. This sort of contagion can spread to the whole financial industry – the financial crisis.

(c ) The Great Recession refers to the sharp rise in unemployment, fall in employment and output. Monetary policy: a lot of expansionary measures were taken such as lowering the interest rates paid by central banks and quantitative easing. These measures aim at lowering both the short term and

long term real interest rate, thus increasing consumption and investment demand, both help to increase GDP. They also help to increase labour demand thus increasing employment.
Fiscal policy: there has been large use of discretionary countercyclical policies (in the US, the 2008 Economic Stimulus Act and the 2009 American Recovery and Reinvestment Act) whose goal was to increase spending and, via the government expenditure multiplier, raise GDP and employment.

B17. (a) As demand for currency B rises, B's central bank will have to supply more of currency B in exchange of currency c to maintain the pegged exchange rate. So B's central bank is accumulating the foreign reserve in terms of currency C.

For currency A, as investors sell currency A in exchange for currency B, supply of currency A increases and currency A depreciates against B and C, as the two are pegged. [show in figures]




(b) The Big Mac index is the relative price of a Big Mac in the local currency of each country relative to the price in US dollar of a Big Mac bought in the US.
If PPP holds, the big mac index will be equal to the nominal exchange rate (dollars per local currency). If it is lower that means that the local currency is undervalued relative to the dollar, and if it is higher vice versa.

(c ) If currency B is undervalued, consumers in country C will benefit from cheaper products. However, this also lower country B's real exchange rate with country C. This implies a lower export and higher import for country C (figure of real exchange rate and export).
Fall in export implies a fall in labour demand (figure on labour market).
If there is no wage rigidity, then both wages and employment fall. In this case workers suffer in terms of lower wages and losing their jobs.
If there is wage rigidity, then wages will remain but employment fall and unemployment rise. In this case workers who lose their job suffer.

B18. (a) The first column of the table show that the income per worker in China is lower than US (about 1/7), thus China is less productive than the US.

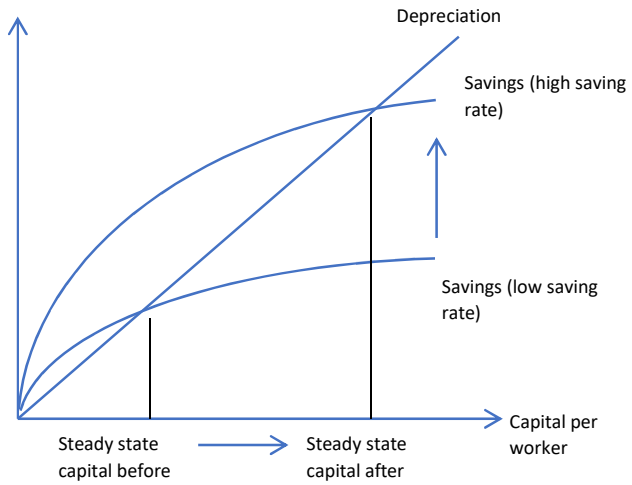
Starting with an aggregate production function Y=AF(K,H) or the cobb-douglas production function.

The second column show that years of schooling in China is lower than the US. This implies a lower stock of human capital and less efficient labour force.

The third column show that stock of physical capital is lower in China. This also lower the efficiency of labour due to the aggregate production function where capital and labour are complement.

The fourth column show that if China has the A in the US, its income per worker will be almost three times higher, from 12,961 to 34,881. This indicates that China's technology must be much below US's technology.

(b) A shift in saving curve in the solow model to show that it increases steady state output per worker through increasing the stock of capital in the Table. (figure)




It also increases growth in the short run through the dynamics of convergence to a new steady state. However, due to diminishing marginal product of capital (MPK), growth that is due to capital accumulation converges to zero in the steady state.

However, this cannot last because there is an upper bound on saving rate at 1. Moreover, it is not always optimal to increase saving rate. Higher saving rate raises total output but it reduces the consumption share of output. There is an optimal level of saving rate s*. Any s above s* implies lower consumption, i.e. lower living standards.

(c) As the table shows that China's technology is much lower than the US'. The policy of adopting better technology or conducting R&D will both increase A. Using the Solow model, an increase in A will shift the saving curve (figure) thus increasing steady state output per worker. This is a sustainable source of growth in the long run because there is no limit to how A can increase.

This is different from increasing the saving rate as higher A itself increases the MPK rather than simply raising capital stock which is subject to diminishing MPK.