EC1B5 Winter Term 2023-24
Answer Key to Discussion Question 5 (Week 7 Class)

Week 7 class: In week 5 we learnt about the consumption-saving decision which is at the core of understanding macroeconomic variables such as consumption and investment.
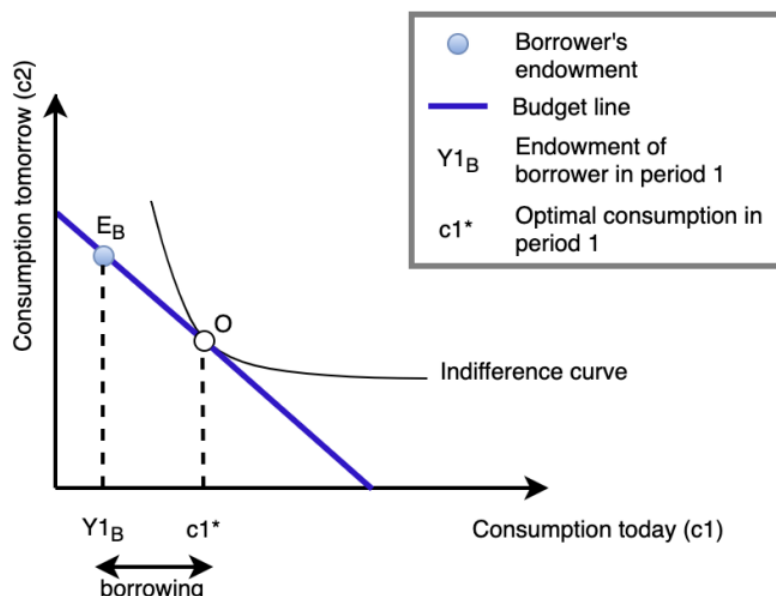
   a. Consider a model economy with two periods. Suppose there are two types of consumers in the economy: type B and type L. Making use of graphs with indifference curves and budget lines to explain the conditions for type B to be borrower and type L to be lender in the market equilibrium.

   b. In you diagram, show the consumption and saving behaviour of both types of consumers.
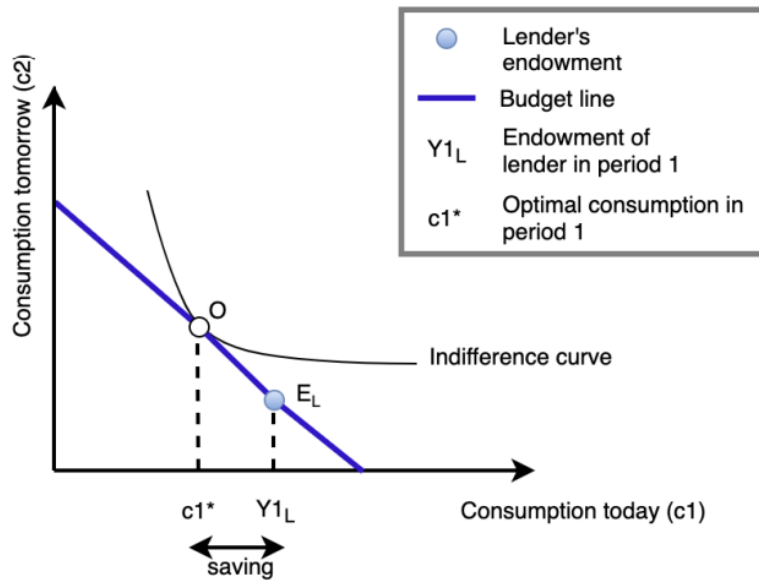
Answer key:

There are two simple conditions for B to be a borrower and L to be a lender.

First, they can have the same indifference curve and the same budget line, but type B has less current income than type L. In the graph, there is one budget line with one indifference curve touching at point O. The endowment E_B of type B is to the left of O while the endowment E_L of type L is to the right of O. They both choose the same consumption bundle O where type L has positive saving while type B has negative saving (i.e. borrowing).

As a borrower, your current consumption is greater than your current endowment $Y1_B$ resulting in negative savings/borrowings. In the future, since the borrower has to repay debt, his future optimal consumption will be less than his future endowment $Y2_B$. The opposite is true for a lender.

Second, they can have the same budget line and same endowment, but type B has a steeper indifference curve, i.e. type B is willing to substitute more future consumption for current consumption (a higher marginal rate of substitution across c1 and c2). In the graph, there is one budget line and two indifference curves. The indifference curve for type B touches the budget line at his optional consumption bundle O_B which is to the right of his endowment E. The indifference curve for type L touches the budget line at optimal consumption bundle O_L which is to the left of his endowment.