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| **Exercises from old exams to chapters in B & W.** |

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| **Chapter 3** |

**Exercise 1**

Consider an economy where aggregate production Y, is described with the production function Y=F (K, L).

1. In the Solow model, what do we assume about marginal productivity and returns to scale?
2. In a Solow model explain the Steady state, by using words and a diagram.
3. As a follow up to question b), explain what happens if capital accumulation is greater than zero.
4. According to the Solow model, explain the convergence hypothesis.

**Exercise 2**

1. According to the Solow’s decomposition, three sources of economic growth are identified. What are they?
2. In a Solow model with no population growth and no technological progress, analyze the effect of an increased depreciation rate on the capital labour ratio and the output labour ratio.
3. Explain the statement: “In a Solow model with no population growth and no technological progress, we cannot explain permanent, sustained growth”.

**Exercise 3**

1. In the Solow model, what are the assumptions of the production function on intensive form?
2. Use the Solow model to discuss if capital accumulation can proceed without bounds.
3. What are the main conclusions about long run growth in the Solow model, if we take population growth and technological progress into account?

**Exercise 4**

1. What is a production function?
2. In the Solow model, what are the assumptions of the production function?
3. What is the Steady State and the Golden Rule in a Solow model?
4. Use the Solow model to explain what will happen if a country increases their savings rate.
5. What does the Solow model predict about growth in rich countries (high GDP per capita) compared to poor countries (low GDP per capita) and what is it called?

**Exercise 5**

1. Define the production function in intensive form.
2. What do we assume about marginal productivity and returns to scale in a Solow model?
3. Explain Steady State in a Solow model.
4. What is the Golden Rule in a Solow model?
5. What are the consequences of “disobeying” the Golden Rule?