Макроэкономика 3 — МИЭФ, 2026 final

МИЭФ | Макроэкономика 3 | 2026 | final

PROBLEM 1

Short questions — 45 points

(a) (15 points) “According to the Malthusian model, since low income per worker is the result of a scarcity of land, a country with a larger land mass will have higher living standards, even in the long run.”

True or false? Explain your answer.

(b) (15 points) Explain the essence of the Kuznets consumption puzzle. How do modern theories of consumption resolve this puzzle?

(c) (15 points) Use the model of sovereign default with limited commitment presented at the lecture to analyze the following claim:

“A country is better off if the penalty for defaulting on its foreign debts is low.”

If the claim is true, produce a proof. If the claim is false, produce a graphical counterexample and provide an intuitive explanation.

PROBLEM 2

20 points

Suppose that in the real intertemporal model with investment, firms are price takers in input markets but price makers in the output market.

(a) (10 points) Explain the slope of the output supply curve.

(b) (10 points) Suppose that market power is reduced due to institutional reforms. Using labor- and output-market diagrams, analyze the impact of these reforms. Assume that wealth effects are small, but different from zero. Explain carefully.

PROBLEM 3

35 points

Consider two economies, A and B, described by the Solow model. Assume that these economies have the same technologies, with no technological progress, and that TFP equals 1. Suppose that depreciation is negligible in both economies. They also have the same initial population and the same population growth rates, but economy A has a saving rate two times lower than economy B. Assume that both economies operate along their balanced growth paths. All markets are perfectly competitive.

(a) (10 points) Using one graph, illustrate the current position of each economy in terms of GDP per capita. On this graph, show the corresponding interest rates in each economy and explain the result.

(b) (12 points) Assume that both economies open up to foreign investment and that these are the only two economies in the world. Foreign investors are able to earn a return equal to MPK per unit invested.

Reproduce your graph from part (a). Consider the economy that attracts foreign investment and illustrate the resulting final levels of:

1. GDP per worker, denoted by y^*;
2. GNP per worker, denoted by y^N.

Explain carefully.

(c) (13 points) Is it true that the final change in GNP per worker for the country that attracts foreign investment is ambiguous? If yes, provide a detailed example. If no, provide an algebraic proof.