

Question 1 (20%)

Explain briefly the following terms

- a) Multiplier effect
- b) Real interest rate
- c) Trade balance
- d) Real exchange rate
- e) Steady state level of production per worker
- f) Technological progress

Question 2 (30 %)

Several countries came out of the pandemic with a low unemployment rate and a substantially higher public debt than prior to the pandemic. In one country, the Ministry of Finance proposes to increase taxes in order to reduce the public debt.

- a) Derive the IS-LM model for a closed economy.
- b) Consider the interest rate as fixed and discuss the effect of the proposed policy on production, private consumption and private investments.

Question 3 (50%)

Many countries had an increasing inflation rate in 2022. Consider the case that the underlying reason is a higher mark-up of the price over the wage cost.

- a) Use a model for wage setting and price setting to discuss the effect of a higher mark-up on real wages and unemployment.
- b) Present a relationship between inflation and unemployment and discuss the impact of a higher mark-up on the relationship.
- c) Define the terms “natural rate of unemployment” and “natural rate of production”.

In many countries, the mandate of the central bank is stable inflation with an explicit inflation rate target. Consider the situation where the expected inflation rate in the economy is equal to the inflation rate target of the central bank, and the central bank changes the interest rate in order to achieve an inflation rate equal to the target.

- d) Use a macroeconomic model to discuss the effect of a higher mark-up on production, private consumption and private investment.
- e) How is the answer in d) modified if the government increases taxes?