

HE1002 Macroeconomics – Mock Final Exam

Academic Year 2025/2026, Semester 1

Quantitative Research Society @NTU

November 12, 2025

Question 1 (2 marks each)

Instruction: For each of the following questions, fill in the blank, state the formula to be used, and show your working.

(a) Nominal GDP Calculation

A country produces only two goods: rice and tea. In 2024, it produced 1,000 units of rice at \$2 each and 500 units of tea at \$4 each. If 2023 is the base year and prices were \$1.50 for rice and \$3.50 for tea, the nominal GDP for 2024 was _____.

(b) Marginal Propensity to Consume (MPC)

If investment expenditure increases by \$100 and GDP increases by \$400 as a result, then the Marginal Propensity to Consume (MPC) is equal to _____ (2.d.p).

(c) Reserve Ratio and Money Multiplier

Suppose people do not hold money as cash outside the bank, if the money multiplier is 2, then the reserve ratio is _____ (1.d.p).

(d) Real Exchange Rate

Suppose the current Singapore-Euro exchange rate is 0.68 euro per Singapore dollar (SGD), and the aggregate price level is 140 for Singapore and 112 for the Eurozone. If Singapore is the home country, the real exchange rate is _____ (2.d.p).

Question 2 (3 marks each)

- (a) Why is Purchasing Power Parity (PPP) unlikely to hold for a product like the Big Mac across different countries?
- (b) Describe ONE direct cost and ONE indirect cost of government debt. Briefly explain your answer.
- (c) Classify each of the following situations as either frictional, structural, or cyclical unemployment?

Situation	Type of Unemployment
Marcus lost his job due to company downsizing triggered by an economic downturn.	
Mia is unemployed because she's waiting for the perfect job offer even though she has several options.	
Ethan is unemployed because his job as a machine operator was eliminated when companies in his industry relocated their operations to China in search of lower production costs.	

Question 3 (5 marks each)

Instruction: For each of the following questions, clearly explain your reasoning.

- (a) True or false: The GDP deflator uses a fixed basket of goods and services like the Consumer Price Index.
- (b) True or false: Population growth rate has no impact on long-run growth in real GDP per capita.
- (c) True or false: In a situation where inflation is persistently below target and interest rates are at the effective lower bound, the Federal Reserve is likely to reduce the federal funds rate to further stimulate economic growth.

Question 4 (10 marks each)

Suppose the ongoing boom in artificial intelligence (AI) is increasing global and domestic investors' interest in U.S. financial markets. Using a well-labelled diagram of the foreign exchange market for U.S. dollars, illustrate and explain the effects of this AI boom on the value of the U.S. dollar and the balance of trade of the U.S.