

Final Material

General guidelines:

1. You can bring one double-sided sheet of paper, letter size ($8\frac{1}{2} \times 11$ in or 215.9×279.4 mm), with any content you want.
2. Books, notes, calculators or any other material is not allowed.
3. The questions are based on (1) notes, (2) lectures, and (3) homework assignments.
4. There are three types of questions that I can ask: (1) graph/tables questions, where I ask to draw graphs or answer a question based on a given graph/table, (2) verbal questions, where the answer is verbal, and (3) math questions, where I ask to derive some equation or formula and use them.

Detailed list of topics

Part I (30%)

1. **Introduction and preliminaries.**
 - a. Growth rates, variables that grow at a constant rate, doubling time, approximate growth rates of products and ratios, rule of 70.
 - b. Important: Properties of logarithmic scale. Prove that the \ln of a constant growing variable is a straight line and know that the slope of that line is approximately equal to the growth rate of the original variable. Applying the properties of logarithmic scale to graphs.
2. **NIPA.**
 - a. Measuring nominal GDP using the expenditure approach and income approach.
 - b. Decomposing the nominal GDP into real GDP and price level using the base year approach.
3. **Micro foundations.**
 - a. Consumer choice, including Lagrange method.
 - b. Producer choice.
4. **Business Cycles**
 - a. Classical model
 - b. Keynesian model
5. **Unemployment**
 - a. Labor market definitions and measuring unemployment rate and labor force participation rate
 - b. Search model of unemployment

Part II (70%)

6. **Saving**
 - a. The relationship between national saving and investment (Saving and Investment equation).
 - b. Two-period model of consumption and saving
 - c. Ricardian equivalence theorem
7. **Investment and the capital market**

- a. Optimal Investment Condition
- b. Capital market
- 8. **Money and banking**
 - a. Quantity theory of money
 - b. A model of banking and money supply
- 9. **International Macroeconomics**
 - a. Nominal exchange rates
 - b. Law of One Price
 - c. Purchasing Power Parity
 - d. Predicting future trends in exchange rates
 - e. Relationship between exchange rates and monetary policy