ECON 205 Principles of Macroeconomics

Midterm 1 Mock Exam C (Timed)

Time limit: 75 minutes
Total points: 100
Allowed: basic calculator only

Coverage: Lectures 01-07

Section I: Multiple Choice (24 points; 2 each)

1. A decrease in number of firms in a market tends to:

A. Shift demand left
B. Shift supply left
C. Shift demand right
D. Move along supply

2. A binding price ceiling generates:

A. Surplus
B. No effect
C. Shortage
D. Inflation

3. Which is NOT part of GDP under spending approach?

A. Consumption
B. Investment
C. Net exports
D. Transfer payments

4. Real GDP growth measures growth in:

A. Prices only
B. Quantity of output
C. Tax revenue only
D. Labor force only

5. If exports are 900 and imports are 980, NX is:

A. +80
B. -80
C. +1880
D. -1880

6. A person is unemployed if the person is:

A. Not working and not searching
B. Working part-time involuntarily only
C. Not working and actively searching
D. Retired and not working

7. Frictional unemployment is associated with:

A. Recessions only
B. Normal job transitions
C. Skill obsolescence only
D. Seasonal weather only

8. If real interest rises, all else equal, current consumption tends to:

A. Rise
B. Fall
C. Stay unchanged
D. Equal investment

9. Public saving is defined as:

A. Y - C - T
B. T - G
C. Y - C - G
D. I - NX

10. GDP deflator inflation can differ from CPI inflation because:

A. CPI uses domestic output basket only
B. Deflator and CPI always use same basket
C. Deflator uses production basket; CPI uses consumer basket
D. CPI excludes all services

11. In Y = A*K^0.5*L^0.5, doubling K with A,L fixed means:

A. Y doubles
B. Y rises by sqrt(2)
C. Y falls
D. Y unchanged

12. Natural unemployment rate is unemployment when:

A. Output is below potential only
B. Economy has no frictional unemployment
C. Economy is at potential output (no cyclical gap)
D. Inflation is zero

Section II: Graphing and Market Analysis (20 points)

13) Electricity Price Cap (10 points)

Initial equilibrium: P* = 0.20 per kWh, Q* = 500 million kWh.
Government sets ceiling Pc = 0.15. At Pc: QD = 560, QS = 430 (millions).

Tasks: 1. Draw graph with all labels. (4) 2. Binding or non-binding? (1) 3. Compute shortage. (2) 4. Two non-price consequences. (2) 5. Effect of supply subsidy on shortage. (1)

14) Wheat Market Two-Shock (10 points)

Shock 1: Fuel costs rise for farmers.
Shock 2: Population growth raises wheat demand.

Tasks: 1. Draw both shifts. (4) 2. Equilibrium price effect. (2) 3. Quantity effect and ambiguity explanation. (3) 4. One-sentence ceteris paribus note. (1)

Section III: Quantitative Problems (40 points)

15) National Accounts and Deflator (16 points)

Economy has streaming services and furniture.

Year	Streaming Price	Streaming Qty	Furniture Price	Furniture Qty
2025	100	1500	400	220
2026	110	1620	440	236

Tasks: 1. Nominal GDP in both years. (4) 2. Real GDP in both years (2025 base). (4) 3. Real GDP growth. (4) 4. Deflator in both years and inflation via deflator. (4)

16) Labor Market Metrics (12 points)

Adult population = 220 million
Employed = 136 million
Unemployed = 12 million

Tasks: 1. Labor force. (2) 2. Unemployment rate. (3) 3. LFPR. (3) 4. EPOP. (2) 5. If 4 million unemployed stop searching, recompute unemployment rate. (2)

17) Saving and NX (12 points)

Given: Y = 7000, C = 4700, T = 1200, G = 1500, I = 980

Tasks: 1. Compute Sp, Sg, S. (6) 2. Compute NX from S = I + NX. (2) 3. Trade surplus or deficit? (2) 4. Explain effect of higher r on (i) C and (ii) I. (2)

Section IV: Short Concept Responses (16 points)

18) Elasticity + Revenue (8 points)

Price increases by 5%, quantity demanded decreases by 2%.

Tasks: 1. Approximate demand elasticity. (3) 2. Elastic or inelastic? (2) 3. Revenue direction and explanation. (3)

19) Production, Returns, and Policy (8 points)

Given Y = AK^0.5L^0.5:

Tasks: 1. If K and L both double, output changes by what factor? (3) 2. Name the returns-to-scale type. (2) 3. Give one policy to raise A and explain mechanism. (3)