5.1 Macroeconomic activity, objectives and policy

Name: _____ Class: _____ Date: _____ **Total: 24 marks**

KEY WORDS multiplier • monetary policy

Macroeconomic activity, objectives and policy

Objective

Calculate real GDP with the deflator, use the AD/AS model with the multiplier, apply the CPI basket, and evaluate the three policy families against the objectives and their trade-offs (syllabus 3.1–3.7).

1 Key knowledge and worked examples

Macro toolkit. Real GDP = nominal ÷ deflator × 100: 112/108 gives 103.7. AD $P = 90 - Y/2$ meets SRAS $P = 20 + Y/2$ at $(70, 55)$; a 15-injection gives $(85, 62.5)$. Multiplier $k = 1/(1 - MPC)$: MPC 0.5 → $k = 2$, so £30bn → £60bn. CPI: weights 50/30/20 over relatives 110/100/120 → 109 → 9% inflation. LRAS 85 → 105 cuts the price level 47.5 → 37.5 with rising output.

2 Practice

2.1 Nominal GDP index is 112, the deflator 108 and the population index 102. Calculate real GDP and real GDP per head. [3]

2.2 Write the AD equation and compute AD with $C = 60$, $I = 20$, $G = 20$, $X = 25$ and $M = 25$. [2]

2.3 Solve the shared model's equilibrium price level and real output. [3]

2.4 A CPI basket has weights 50, 30 and 20 with price relatives 110, 100 and 120. Calculate the CPI and the inflation rate. [3]

2.5 Name any four instruments of supply-side policy. [2]

3 Exam-style questions

3.1 *(Original, HL multiplier.)* With MPC = 0.5, calculate the multiplier and the total change in income from a £30bn infrastructure injection; then state the multiplier if MPC rises to 0.8. [4]

3.2 *(Original, AD/AS.)* On AD $P = 90 - Y/2$ and SRAS $P = 20 + Y/2$, a stimulus shifts AD up by 15 at every output. Find both equilibria and state what happens to output and the price level; contrast the outcome if the long-run AS were vertical. [4]

3.3 *(Original, policy evaluation.)* A central bank cuts interest rates from 6.5% to 6.25%. Explain the transmission mechanism to AD and name one trade-off the policy accepts.[3]

Solutions

2.1 Real $= \frac{112}{108} \times 100 = 103.7$; per head $= \frac{103.7}{102} \times 100 = 101.7$.

2.2 $AD = C + I + G + (X - M) = 60 + 20 + 20 + (25 - 25) = 100$.

2.3 $90 - Y/2 = 20 + Y/2$ gives $70 = Y$, so output $= 70$ and the price level $= 90 - 35 = 55$.

2.4 CPI $= 0.5 \times 110 + 0.3 \times 100 + 0.2 \times 120 = 55 + 30 + 24 = 109$; inflation $= 9\%$.

2.5 Any four of: education and training; infrastructure investment; deregulation; privatisation; lower taxes on work/investment; labour-market reform.

3.1 $k = \frac{1}{1-0.5} = 2$; the change in income $= 2 \times 30 =$ £60bn (each round re-spends half the last). If MPC $= 0.8$: $k = \frac{1}{0.2} = 5$ – the same injection would raise income by £150bn.

3.2 Before: $(70, 55)$. After: AD becomes $P = 105 - Y/2$, so $105 - Y/2 = 20 + Y/2$ gives $(85, 62.5)$ – output rises 15 and the price level rises 7.5: demand management buys output with inflation. Against a VERTICAL long-run AS the price level alone rises – output is pinned at the natural level, which is the monetarist case for supply-side over demand-side policy.

3.3 Lower rates cut borrowing costs and the reward to saving: consumption and investment rise, so AD shifts right, raising output and (the closer to capacity) the price level; cheaper domestic assets may also depreciate the currency, lifting net exports. Trade-off accepted: higher inflation now, possible asset-price bubbles, and savers lose income (a distributional cost).

Local review guidance: deflator and multiplier arithmetic show the division first; both equilibria solved before the vertical-AS contrast; (R1 3.3) the mechanism named link by link with BOTH sides of the trade-off. This is authored classroom guidance.