S6 Economics Practice Paper (Set 2) | GDP, CPI and inflation, unemployment rate, money creation, exchange rates and trade balance

S6 Economics | Time allowed: 75 minutes | Total: 100 marks | 24 questions

Section A: GDP and national income

Question 1 (16 marks)

1. The expenditure data of an economy are (in billions of dollars): private consumption 1200, gross domestic fixed capital formation 450, government consumption 380, exports of goods and services 900, imports of goods and services 950. Calculate GDP at market prices by the expenditure approach. (4 marks)

> **Answer:** GDP = C + I + G + X - M = 1200 + 450 + 380 + 900 - 950 = 1980 billion dollars.

2. Net factor income from abroad is -40 (billion dollars). Calculate gross national product (GNP). (4 marks)

> **Answer:** GNP = GDP + net factor income from abroad = 1980 + (-40) = 1940 billion dollars.

3. Population is 7.4 million. Calculate per capita GDP in dollars, to the nearest dollar. (4 marks)

> **Answer:** Per capita GDP = 1980 x 10^9 / 7,400,000 = about 267568 dollars.

4. Explain why a rise in GDP does not necessarily mean a better standard of living. (Give two points) (4 marks)

> **Answer:** First, GDP ignores non-market activities (housework, volunteering) and the value of leisure. Second, it does not show income distribution, pollution or health, and population growth can dilute the per capita figure.

Section B: CPI and inflation

Question 2 (16 marks)

5. The expenditure weights of the CPI are: food 40 percent, housing 35 percent, others 25 percent; the base-year index is 100. This year the group indices are food 130, housing 115, others 120. Calculate this year CPI. (4 marks)

> **Answer:** CPI = 0.40 x 130 + 0.35 x 115 + 0.25 x 120 = 52.00 + 40.25 + 30.00 = 122.25.

6. Calculate the inflation rate relative to the base year. (4 marks)

> **Answer:** Inflation rate = (122.25 - 100) / 100 x 100 = 22.25 percent.

7. If last year CPI was 118.0, calculate this year year-on-year inflation rate to 2 decimal places. (4 marks)

> **Answer:** Year-on-year inflation = (122.25 - 118.0) / 118.0 x 100 = 3.60 percent.

8. State two limitations of using the CPI to measure changes in the cost of living. (4 marks)

> **Answer:** First, the weights are fixed on the base-year spending pattern and may not reflect substitution by consumers or new products. Second, it covers only marketed goods and services and ignores quality improvements and differences in spending patterns between households.

Section C: Unemployment and the labour force

Question 3 (16 marks)

9. In an economy the number of employed persons is 3,600,000 and the unemployed 240,000. Find the labour force. (4 marks)

> **Answer:** Labour force = employed + unemployed = 3,600,000 + 240,000 = 3840000 persons.

10. Calculate the unemployment rate. (4 marks)

> **Answer:** Unemployment rate = 240,000 / 3840000 x 100 = 6.25 percent.

11. The working-age population is 4,800,000. Calculate the labour force participation rate. (4 marks)

> **Answer:** Participation rate = 3840000 / 4,800,000 x 100 = 80 percent.

12. If 60,000 unemployed persons become discouraged and leave the labour force, calculate the new unemployment rate and explain why a lower rate does not mean better employment conditions. (4 marks)

> **Answer:** New labour force = 3780000 and new unemployment rate = 180,000 / 3780000 x 100 = 4.76 percent. The rate falls only because the denominator shrinks; employment has not risen, so the real problem may be worse.

Section D: Deposit creation and money multiplier

Question 4 (16 marks)

13. The required reserve ratio of the banking system is 20 percent. Calculate the money multiplier. (4 marks)

> **Answer:** Money multiplier = 1 / reserve ratio = 1 / 0.20 = 5.

14. A person deposits 50,000 dollars of cash into the banking system. Assuming no cash drain, find the maximum total deposits the system can create. (4 marks)

> **Answer:** Total deposits = 50,000 x 5 = 250000 dollars.

15. Find the excess reserves and the amount of new deposits (loans) created. (4 marks)

> **Answer:** Excess reserves = 50,000 x (1 - 0.20) = 40000 dollars; new deposits = 40000 x 5 = 200000 dollars.

16. If the reserve ratio rises to 25 percent, find the new maximum total deposits and the difference from the original figure. (4 marks)

> **Answer:** New total deposits = 50,000 / 0.25 = 200000 dollars, which is 50000 dollars less than the original 250000 dollars.

Section E: Exchange rates and trade

Question 5 (16 marks)

17. A Hong Kong exporter sells goods to the United States for US$120,000. If the exchange rate is US$1 = HK$7.80, find the Hong Kong dollar amount received. (4 marks)

> **Answer:** Hong Kong dollar receipts = 120,000 x 7.80 = HK$936000.

18. If the Hong Kong dollar depreciates to US$1 = HK$7.85, find the Hong Kong dollar receipts for the same export and the increase. (4 marks)

> **Answer:** Receipts = 120,000 x 7.85 = HK$942000, an increase of HK$6000.

19. A Hong Kong firm imports raw materials costing US$50,000. Calculate the Hong Kong dollar cost at 7.80 and at 7.85, and the increase. (4 marks)

> **Answer:** The cost is HK$390000 and HK$392500, an increase of HK$2500.

20. Based on the above, explain the effect of a depreciation of the Hong Kong dollar on local exporters and importers, and the expected effect on the visible trade balance. (4 marks)

> **Answer:** Exporters gain higher receipts and competitiveness so export volume tends to rise; importers face higher costs so import volume tends to fall. Both help the visible trade balance, although in the short run import values may still rise if import demand is inelastic.

Section F: Fiscal policy and the trade balance

Question 6 (20 marks)

21. The marginal propensity to consume is 0.8. Calculate the simple expenditure multiplier. (5 marks)

> **Answer:** Multiplier = 1 / (1 - MPC) = 1 / (1 - 0.8) = 5.

22. Government spending rises by 20 billion dollars. Find the maximum increase in equilibrium income. (5 marks)

> **Answer:** Increase in income = 20 x 5 = 100 billion dollars.

23. If instead the government cuts taxes by 20 billion dollars (a lump-sum tax), find the increase in equilibrium income and explain why it differs from the previous part. (5 marks)

> **Answer:** Disposable income rises by 20 billion, of which 0.8 x 20 = 16 billion is spent, so income rises by 16 x 5 = 80 billion dollars. Part of a tax cut is saved, so its effect is smaller than that of government spending.

24. Goods exports are 90 billion dollars, goods imports 95 billion dollars and net services exports 12 billion dollars. Find the visible trade balance and the overall trade balance, stating whether each is a surplus or a deficit. (5 marks)

> **Answer:** Visible trade balance = 900 - 950 = -50 billion (a visible trade deficit of 50 billion); overall trade balance = -50 + 120 = +70 billion (an overall surplus of 70 billion), as net services exports more than offset the goods deficit.