2.8 Aggregate Supply: Short Run, Long Run and Supply-Side Shocks

AQA 7136 · Calculators not allowed · about 75 minutes · Write-in edition

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer all questions. Use full sentences for questions worth 4 marks or more. Time guidance 75 minutes. No calculator is allowed.

1 State two ways in which an adverse supply-side shock, such as a major drought that reduces agricultural yields, differs in its macroeconomic effects from a pure demand-side shock caused by a sudden fall in consumer confidence.

(Total for Question 1 is 3 marks)

2 Explain two ways in which an increase in nominal wages across an economy could shift the short-run aggregate supply (SRAS) curve. Use short-run cost reasoning.

(Total for Question 2 is 3 marks)

3 State and briefly explain one reason why an exchange rate appreciation could shift short-run aggregate supply (SRAS) to the right in a small open economy.

(Total for Question 3 is 3 marks)

4 Explain two reasons why short-run aggregate supply (SRAS) might be relatively flat at low levels of output but become steeper as the economy approaches potential output (LRAS).

(Total for Question 4 is 3 marks)

5 Explain briefly how a temporary negative supply shock and a permanent reduction in productive capacity would differ in their effects on SRAS and LRAS and on policy responses.

(Total for Question 5 is 4 marks)

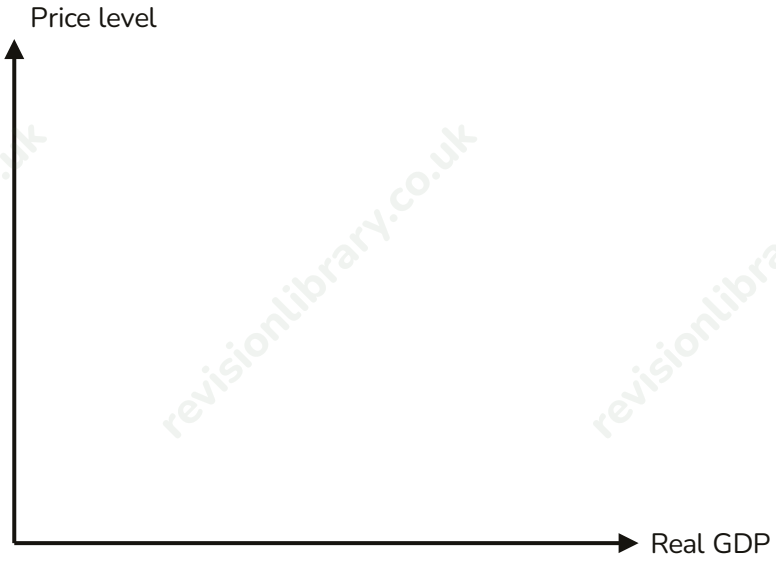
6 Evaluate the view that supply-side shocks pose a greater risk to price stability than demand-side shocks. In your answer, analyse mechanisms, consider diagrammatic evidence, weigh the role of policy responses and timing, and reach a supported judgement.

(Total for Question 6 is 25 marks)

7 Explain how a sustained improvement in total factor productivity (TFP) would affect both SRAS and LRAS, and indicate the likely time profile of these effects.

(Total for Question 7 is 3 marks)

8 Diagram question: A government implements a long-term programme of public investment in transport and digital infrastructure expected to raise productive capacity. On an AD/AS diagram, show the effect this policy would have on LRAS and SRAS over time, and explain the likely effect on the price level and real output in the medium to long run. (Describe what you would draw.)



(Total for Question 8 is 4 marks)

Mark scheme · 2.8 Aggregate Supply: Short Run, Long Run and Supply-Side Shocks

Question 1

adverse supply shock shifts SRAS left, causing higher prices and lower output; demand shock shifts AD left, causing lower prices and lower output — **B1**

supply shocks can cause stagflation (higher inflation with lower output), whereas demand shocks typically reduce both inflation and output — **B1**

supply shocks can be more persistent if they damage productive capacity (e.g. crop yields), while demand shocks may be more quickly reversed by policy or confidence returning — **B1**

Answer: Supply shock: leftward SRAS shift, higher prices and lower output, potential stagflation and possible long-lasting capacity loss; demand shock: leftward AD shift, lower prices and lower output, usually less inflationary and often easier to counter with demand management.

Question 2

identifies that higher nominal wages increase firms' unit labour costs — **M1**

explains that higher unit costs reduce profitability at each price level, so firms supply less at any given price and SRAS shifts left — **A1**

alternative development: higher wages may lead firms to raise prices or cut employment/production, both reducing short-run aggregate supply — **A1**

Answer: Higher nominal wages raise unit labour costs and reduce profitability, so firms supply less at each price level and SRAS shifts left; firms may also pass costs into higher prices or reduce output/employment, reducing SRAS.

Question 3

identifies that an appreciation makes imported inputs and intermediate goods cheaper in domestic currency terms — **M1**

explains that cheaper imported inputs reduce firms' production costs, increasing supply at each price level and shifting SRAS to the right — **A1**

alternative development: cheaper imported capital goods can raise productivity, reinforcing the rightward shift — **B1**

Answer: An appreciation reduces the domestic cost of imported inputs and capital goods, lowering firms' unit costs and so shifting SRAS right as firms supply more at each price level.

Question 4

identifies spare capacity: when output is well below potential, there are unemployed resources and idle capital — **M1**

explains that firms can increase output without bidding up wages or other input prices, so SRAS is relatively flat and output rises more for a given rise in AD — **A1**

identifies that as capacity is used up, inputs become scarcer and marginal costs rise, so SRAS becomes steeper as further increases in AD produce more inflation than extra output — **A1**

Answer: With spare capacity SRAS is flat because firms can use idle labour/capital without raising input prices; as capacity is used up inputs become scarce, marginal costs rise and SRAS steepens so AD increases cause more price rises than extra output.

Question 5

states that a temporary negative supply shock shifts SRAS left but leaves LRAS unchanged — **M1**

explains that the temporary SRAS shift raises prices and lowers output in the short run but can reverse when the shock passes — **A1**

states that a permanent reduction in productive capacity shifts LRAS left (and may also shift SRAS left) — **M1**

explains that a leftward LRAS shift reduces potential output permanently, implying policy must focus on supply-side measures rather than demand management to restore growth — **A1**

Answer: A temporary shock shifts SRAS left raising prices and lowering output temporarily while LRAS remains unchanged; a permanent capacity reduction shifts LRAS left reducing potential output and requiring supply-side policies to rebuild capacity rather than demand stimulus.

Question 6

Level 1 Basic statements about supply-side and demand-side shocks with limited or no analysis, or a narrow explanation of one mechanism with no evaluation or diagrammatic reference. — **1-5**

Level 2 Clear explanation of mechanisms by which supply-side and demand-side shocks affect price level and output, including a simple diagrammatic reference and some indication of policy responses, but limited evaluation or balance. — **6-10**

Level 3 Detailed analysis of both supply-side and demand-side shocks, accurate use of AD/AS diagram(s) to show effects, discussion of the effectiveness and timing of monetary and fiscal policy, consideration of persistence and distributional effects, and a supported judgement on which is the greater risk to price stability. — **11-15**

Level 4 Comprehensive, well-developed analysis including sectoral examples (e.g. oil shocks, wage-price spirals), evaluation of scenarios where each shock could dominate, nuanced discussion of lags, credibility and secondary effects, and a balanced, well-supported conclusion with reference to diagrammatic shifts and policy trade-offs. — **16-20**

Level 5 Excellent evaluation: full range of analytical points, clear and correctly labelled diagrams showing multiple comparative scenarios, sophisticated appraisal of policy options (including supply-side measures and monetary policy limits), consideration of empirical relevance and time horizons, and a decisive, justified judgement recognising conditions under which the view holds or fails. **21-25**

Indicative content:

- Explain how supply-side shocks (e.g. oil price spike, commodity shortages, sudden wage rises, exchange rate shocks) shift SRAS left, causing higher prices and lower output, producing stagflationary pressure.
- Diagram(s): show leftward SRAS shift with AD unchanged; show potential leftward LRAS shift for persistent capacity loss.
- Explain how demand-side shocks shift AD: positive demand shock raises price and output, negative demand shock lowers both; diagrammatically show AD shifts and contrast with SRAS shifts.
- Argue supply shocks can be harder to counter with monetary policy because raising interest rates to fight supply-driven inflation worsens output, while cutting rates to support output risks higher inflation.
- Discuss timing and persistence: supply shocks can be temporary or long-lasting; permanent capacity loss shifts LRAS and reduces potential output, implying long-term inflationary consequences if AD is not reduced.
- Consider policy options: supply-side measures (investment, training, subsidies), targeted fiscal support, and the limits of monetary policy; note lags in supply-side policy vs fast-acting demand management.
- Consider magnitude and frequency: large, economy-wide supply shocks (global oil shocks) can dominate price dynamics; small, persistent demand shocks can also destabilise prices if monetary policy is weak.
- Distributional and sectoral effects: supply shocks can hit particular sectors harder, creating second-round effects such as wage demands that amplify inflation into a wage-price spiral.
- Evaluate empirical context and credibility of policy-makers: independent central banks may prioritise price stability and thus treat demand shocks differently from supply shocks; credibility affects inflation expectations and real wages.
- Conclude with a supported judgement that recognises conditionality: supply shocks often pose a greater immediate risk to price stability because they directly raise costs and can cause stagflation, but in many contexts large demand shocks or poor policy responses can be equally or more destabilising; the final judgement should state which is greater under plausible assumptions and why.

Question 7

a rise in TFP increases output per unit of input, lowering unit costs and raising productive capacity **M1**

in the short run SRAS shifts right because firms can supply more at each price level due to lower costs **A1**

in the long run LRAS shifts right as the economy's potential output increases; the LRAS effect is persistent while the SRAS shift may be an initial response followed by further supply-side gains **A1**

Answer: Higher TFP reduces unit costs and raises output per input, shifting SRAS right in the short run and shifting LRAS right in the long run as potential output increases, with LRAS effects building over time.

Question 8

correctly labels axes and initial curves AD, SRAS and LRAS and marks initial equilibrium E1 **B1**

shows LRAS shifting right to LRAS2 to represent higher potential output due to infrastructure investment **B1**

shows SRAS may also shift right (or remain) as productivity and lower unit costs spread, and explains this timing difference **B1**

identifies medium/long-run outcome: higher real output (potential) and, ceteris paribus, a lower or unchanged price level relative to where it would otherwise be, with explanation that increased capacity reduces inflationary pressure **B1**

Answer: Draw LRAS shifting right (and possibly SRAS right); result: higher real output and lower or stable price level in medium-long run, reducing inflationary pressure.