

## AP Macroeconomics Correlation

\*Pages with “W” indicate reference to Web-only chapters.

Essential Knowledge	Skills	Pages
<b>Unit 1: Basic Economic Concepts</b>		
<b>MOD-1.A.1:</b> Individuals and societies are forced to make choices because most resources are scarce.	<b>1.A:</b> Describe economic concepts, principles, or models.	3-4, 6-9, 12, 86, 142, 152-156, 403, 443
<b>MOD-1.B.1:</b> The PPC is a model used to show the tradeoffs associated with allocating resources.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	9-15, 443, 698-702
<b>MOD-1.B.2:</b> The PPC can be used to illustrate the concepts of scarcity, opportunity cost, efficiency, underutilized resources, and economic growth or contraction.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	10-15, 394, 443, 461, 662-663, 698-703
<b>MOD-1.B.3:</b> The shape of the PPC depends on whether opportunity costs are constant, increasing, or decreasing.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	10-11, 698
<b>MOD-1.B.4:</b> The PPC can shift because of changes in factors of production as well as changes in productivity/technology.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	13-15, 443-447, 662-663, 702
<b>MOD-1.B.5:</b> Economic growth results in an outward shift of the PPC.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	13-15, 443, 449, 662-663, 698-702
<b>MKT-1.A.1:</b> Absolute advantage describes a situation in which an individual, a business, or a country can produce more of a good or service than any other producer with the same quantity of resources.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	697, 698, 699
<b>MKT-1.A.2:</b> Comparative advantage describes a situation in which an individual, a business, or a country can produce a good or service at a lower opportunity cost than another producer.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	697-700
<b>MKT-1.B.1:</b> Production specialization according to comparative advantage results in exchange opportunities that lead to consumption opportunities beyond the PPC.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	15, 31, 699-703, 711
<b>MKT-1.B.2:</b> Comparative advantage and opportunity costs determine the terms of trade for exchange under which mutually beneficial trade can occur.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	700-702
<b>MKT-2.A.1:</b> The law of demand states there is an inverse relationship between price and quantity demanded, leading to a downward-sloping demand curve.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	49, 52, 486-487
<b>MKT-2.B.1:</b> Factors that influence consumer demand, such as changes in consumer income, cause the market demand curve to shift.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	50-52, 58-60, 69-72, 405-407, 488-489, 627, W67-W68
<b>MKT-2.C.1:</b> The law of supply states there is a positive relationship between price and quantity supplied, leading to an upward-sloping supply curve.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	53-54
<b>MKT-2.D.1:</b> Factors that influence producer supply, such as changes in input prices, cause the market supply curve to shift.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	54-55, 58-60, 69-71, 194, 370, 626, W67-W68
<b>MKT-2.E.1:</b> Equilibrium is achieved at the price at which quantities demanded and supplied are equal.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	56-58, 69-72

<b>MKT-2.F.1:</b> Whenever markets experience imbalances – creating disequilibrium prices, surpluses, and shortages – market forces drive prices toward equilibrium.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	56-57, 703-706
<b>MKT-2.G.1:</b> Changes in the determinants of supply and/or demand result in a new equilibrium price and quantity.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	58-60, 69-72, W67-W69
<b>Unit 2: Economic Indicators and the Business Cycle</b>		
<b>MEA-1.A.1:</b> GDP is a measure of final output of the economy.	<b>1.A:</b> Describe economic concepts, principles, or models.	401, 415, 425
<b>MEA-1.A.2:</b> GDP as a total flow of income and expenditure can be represented by the circular flow diagram.	<b>1.A:</b> Describe economic concepts, principles, or models.	37-39, 338-339, 423-428
<b>MEA-1.A.3:</b> There are three ways of measuring GDP: the expenditures approach, the income approach, and the value-added approach.	<b>1.A:</b> Describe economic concepts, principles, or models.	416-422, 430
<b>MEA-1.B.1:</b> GDP is a useful indicator of a nation’s economic performance, but it has some limitations, such as failing to account for nonmarket transactions.	<b>1.D:</b> Describe the similarities, differences, and limitations of economic concepts, principles, or models.	401, 428-429, 437
<b>MEA-1.C.1:</b> The unemployment rate is the percentage of the labor force that is out of work.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	401, 459
<b>MEA-1.C.2:</b> The labor force participation rate is another measure of the labor market activity in an economy. The labor force participation rate is the percentage of the adult population that is in the labor force.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	444, 459
<b>MEA-1.D.1:</b> The measured unemployment rate is often criticized for understating the level of joblessness because it excludes groups such as discouraged workers and part-time workers.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	459-460
<b>MEA-1.E.1:</b> Economists primarily focus on three types of unemployment: cyclical, frictional, and structural.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	460-461
<b>MEA-1.E.2:</b> The natural rate of unemployment is the unemployment rate that would exist when the economy produces full-employment real output. It is equal to the sum of frictional and structural unemployment.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	461, 668
<b>MEA-1.E.3:</b> The deviation of the actual unemployment rate from the natural rate is cyclical unemployment.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	461, 668
<b>MEA-1.E.4:</b> The natural rate of unemployment can gradually change over time because of such things as changes in labor force characteristics.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	461
<b>MEA-1.F.1:</b> The consumer price index (CPI) measures the change in income a consumer would need in order to maintain the same standard of living over time under a new set of prices as under the original set of prices.	<b>2.C:</b> Interpret a specific economic outcome using quantitative data or calculations.	401, 465
<b>MEA-1.F.2:</b> The CPI measures the cost of a fixed basket of goods and services in a given year relative to the base year.	<b>2.C:</b> Interpret a specific economic outcome using quantitative data or calculations.	426, 465
<b>MEA-1.F.3:</b> The inflation rate is determined by calculating the percentage change in a price index such as the CPI or GDP deflator.	<b>2.C:</b> Interpret a specific economic outcome using quantitative data or calculations.	426, 465

<b>MEA-1.F.4:</b> Real variables, such as real wages, are the nominal variables deflated by the price level.	<b>2.C:</b> Interpret a specific economic outcome using quantitative data or calculations.	291, 327, 424, 426-428, 468, 565
<b>MEA-1.G.1:</b> The CPI as a measure of inflation has some shortcomings, such as substitution bias, causing it to overstate the true inflation rate.	<b>2.C:</b> Interpret a specific economic outcome using quantitative data or calculations.	466-467
<b>MEA-1.H.1:</b> Unexpected inflation arbitrarily redistributes wealth from one group of individuals to another group, such as lenders to borrowers.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	468-469
<b>MEA-1.I.1:</b> Nominal GDP is a measure of how much is spent on output. Real GDP is a measure of how much is produced.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	424, 426-428
<b>MEA-1.I.2:</b> Nominal GDP measures aggregate output using current prices. Real GDP measures aggregate output using constant prices, thus removing the effect of changes in the overall price level.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	424, 426-428
<b>MEA-1.J.1:</b> One way of measuring real GDP is to weigh final goods and services by their prices in a base year. Because this can lead to overstatement of real GDP growth, statistical agencies actually use different methods.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	427
<b>MEA-1.J.2:</b> Nominal GDP can be converted to real GDP by using the GDP deflator.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	426-428
<b>MEA-2.A.1:</b> Business cycles are fluctuations in aggregate output and employment because of changes in aggregate supply and/or aggregate demand.	<b>1.A:</b> Describe economic concepts, principles, or models.	400-401, 456-459, 530-536
<b>MEA-2.A.2:</b> The phases of a business cycle are recession and expansion.	<b>1.A:</b> Describe economic concepts, principles, or models.	400-401, 457
<b>MEA-2.A.3:</b> The turning points of a business cycle are peak and trough.	<b>1.A:</b> Describe economic concepts, principles, or models.	457
<b>MEA-2.A.4:</b> The difference between actual output and potential output is the output gap.	<b>1.A:</b> Describe economic concepts, principles, or models.	461-463, 511-515, 530-536, 544-547
<b>MEA-2.A.5:</b> Potential output is also called full-employment output. It is the level of GDP where unemployment is equal to the natural rate of unemployment.	<b>1.A:</b> Describe economic concepts, principles, or models.	461, 511, 659
<b>Unit 3: National Income and Price Determination</b>		
<b>MOD-2.A.1:</b> The aggregate demand (AD) curve describes the relationship between the price level and the quantity of goods and services demanded by households (consumption), firms (investment), government (government spending), and the rest of the world (net exports).	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	521-522, 627, 678
<b>MOD-2.A.2:</b> The negative slope of the AD curve is explained by the real wealth effect, the interest rate effect, and the exchange rate effect.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	483-484, 521-522
<b>MOD-2.A.3:</b> Any change in the components of aggregate demand (consumption, investment, government spending, or net exports) that is not due to changes in the price level leads to a shift of the AD curve.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	483-484, 488-489, 522-524, 627, 660, 661-664, 678, 680, 695
<b>MOD-2.B.1:</b> A \$1 change to autonomous expenditures leads to further changes in total expenditures and total output.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	490-491, 504, 522-523, 541, 544-546

<b>MOD-2.B.2:</b> The expenditure multiplier quantifies the size of the change in aggregate demand as a result of a change in any of the components of aggregate demand.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	490-494, 504, 513, 541, 544-547, 622, 623, 678
<b>MOD-2.B.3:</b> The tax multiplier quantifies the size of the change in aggregate demand as a result of a change in taxes.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	510, 513, 544-547
<b>MOD-2.B.4:</b> The expenditure multiplier and tax multiplier depend on the marginal propensity to consume.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	490-494, 504, 510, 513, 544-547, 622, 623
<b>MOD-2.B.5:</b> The marginal propensity to consume is the change in consumer spending divided by the change in disposable income. The sum of the marginal propensity to consume and marginal propensity to save is equal to one.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	482-483, 491
<b>MOD-2.C.1:</b> The short-run aggregate supply (SRAS) curve describes the relationship between the price level and the quantity of goods and services supplied in an economy.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	525-528, 626
<b>MOD-2.C.2:</b> The SRAS curve is upward-sloping because of sticky wages and prices.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	460, 525-527, 658, 677-678, 683-684
<b>MOD-2.C.3:</b> Any factor that causes production costs to change, such as a change in inflationary expectations, will cause the SRAS curve to shift.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	528-530, 626, 661, 662, 666-667, 678
<b>MOD-2.D.1:</b> Moving along the SRAS curve, an increase in the price level is associated with an increase in output, which means employment must correspondingly rise. With the labor force held constant, unemployment will fall. So, there is a short-run trade-off between inflation and unemployment.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	525-528, 544-545, 664-665
<b>MOD-2.E.1:</b> In the long run all prices and wages are fully flexible, while in the short run some input prices are fixed. A consequence of flexible long-run prices and wages is the lack of a long-run trade-off between inflation and unemployment.	<b>1.A:</b> Describe economic concepts, principles, or models.	527, 658, 668-669, 677-378
<b>MOD-2.F.1:</b> The LRAS curve corresponds to the production possibilities curve (PPC) because they both represent maximum sustainable capacity. Maximum sustainable capacity is the total output an economic system will produce over a set period of time if all resources are fully employed.	<b>1.A:</b> Describe economic concepts, principles, or models.	662-663
<b>MOD-2.F.2:</b> The LRAS curve is vertical at the full-employment level of output because in the long run wages and prices fully adjust.	<b>1.A:</b> Describe economic concepts, principles, or models.	527, 658-659
<b>MOD-2.G.1:</b> Short-run equilibrium occurs when the aggregate quantity of output demanded and the aggregate quantity of output supplied are equal – i.e., at the intersection of the AD and SRAS curves.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	530-531, 544-547, 659
<b>MOD-2.G.2:</b> Long-run equilibrium occurs when the AD and SRAS curves intersect on the LRAS – i.e., at the full-employment level of real output.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	659

<b>MOD-2.G.3:</b> The short-run equilibrium output can be at the full-employment level of output, above it, or below it, creating positive (i.e., inflationary) or negative (i.e., recessionary) output gaps.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	461-463, 659-664
<b>MOD-2.H.1:</b> A positive (negative) shock in AD causes output, employment, and the price level to rise (fall) in the short run.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	457-458, 460, 466, 530-534, 544, 545, 626-627, 660, 661-662, 678, 680
<b>MOD-2.H.2:</b> A positive (negative) shock in SRAS causes output and employment to rise (fall) and the price level to fall (rise) in the short run.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	404-405, 457-458, 466, 534, 536, 626, 661, 662, 666-667, 678
<b>MOD-2.H.3:</b> Inflation can be caused by changes in aggregate demand (demand-pull) or aggregate supply (cost-push).	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	466-467, 471, 473, 530-532, 534, 545-546, 660-661, 666-667, 678
<b>MOD-2.I.1:</b> In the long run, in the absence of government policy actions, flexible wages and prices will adjust to restore full employment and unemployment will revert to its natural rate after a shock to aggregate demand or short-run aggregate supply.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	658-662, 678-679, 681-683
<b>MOD-2.I.2:</b> Shifts in the long-run aggregate supply (LRAS) curve indicate changes in the full-employment level of output and economic growth.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	662-664, 679-680, 685-686
<b>POL-1.A.1:</b> Governments implement fiscal policies to achieve macroeconomic goals, such as full employment.	<b>2.A:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	107, 410, 513-515, 535, 543-547, 550-552, 582, 625, 626-627, 673, 687
<b>POL-1.A.2:</b> The tools of fiscal policy are government spending and taxes/transfers.	<b>2.A:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	107, 410, 513-515, 535, 544-547, 550-552
<b>POL-1.A.3:</b> Changes in government spending affect aggregate demand directly, and changes in taxes/transfers affect aggregate demand indirectly.	<b>2.A:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	545
<b>POL-1.A.4:</b> The government spending multiplier is greater than the tax multiplier.	<b>2.A:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	510, 513, 545
<b>POL-1.A.5:</b> Expansionary or contractionary fiscal policies are used to restore full employment when the economy is in a negative (i.e., recessionary) or positive (i.e., inflationary) output gap.	<b>2.A:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	543-547, 625, 673, 687

<b>POL-1.A.6:</b> Fiscal policy can influence aggregate demand, real output, and the price level.	<b>2.A:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	543-547, 626-627, 672
<b>POL-1.A.7:</b> The AD-AS model is used to demonstrate the short-run effects of fiscal policy.	<b>2.A:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	543-547
<b>POL-1.B.1:</b> In reality, there are lags to discretionary fiscal policy because of factors such as the time it takes to decide on and implement a policy action.	<b>2.A:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	552-553
<b>POL-1.C.1:</b> Automatic stabilizers support the economy during recessions and help prevent the economy from being overheated during expansionary periods.	<b>1.A:</b> Describe economic concepts, principles, or models.	547-548
<b>POL-1.C.2:</b> Tax revenues decrease automatically as GDP falls, preventing consumption and the economy from falling further.	<b>1.A:</b> Describe economic concepts, principles, or models.	547-551, 687
<b>POL-1.C.3:</b> Tax revenues increase automatically as GDP rises, slowing consumption and preventing the economy from overheating.	<b>1.A:</b> Describe economic concepts, principles, or models.	547-548, 550, 687
<b>POL-1.C.4:</b> Government policies, institutions, or agencies may also have social service programs whose transfer payments act as automatic stabilizers.	<b>1.A:</b> Describe economic concepts, principles, or models.	547
<b>Unit 4: Financial Sector</b>		
<b>MEA-3.A.1:</b> The most liquid forms of money are cash and demand deposits.	<b>1.D:</b> Describe the similarities, differences, and limitations of economic concepts, principles, or models.	571-573, 596, 605
<b>MEA-3.A.2:</b> Other financial assets people can hold in place of the most liquid forms of money include bonds (interest-bearing assets) and stocks (equity).	<b>1.D:</b> Describe the similarities, differences, and limitations of economic concepts, principles, or models.	605, 637, 640-642, 646-647
<b>MEA-3.A.3:</b> The price of previously issued bonds and interest rates on bonds are inversely related.	<b>1.D:</b> Describe the similarities, differences, and limitations of economic concepts, principles, or models.	606-607
<b>MEA-3.A.4:</b> The opportunity cost of holding money is the interest that could have been earned from holding other financial assets such as bonds.	<b>1.D:</b> Describe the similarities, differences, and limitations of economic concepts, principles, or models.	605-606
<b>MEA-3.B.1:</b> A nominal interest rate is the rate of interest paid for a loan, unadjusted for inflation.	<b>1.A:</b> Describe economic concepts, principles, or models.	327, 486, 565, 604, 605-606
<b>MEA-3.B.2:</b> Lenders and borrowers establish nominal interest rates as the sum of their expected real interest rate and expected inflation.	<b>1.A:</b> Describe economic concepts, principles, or models.	327, 469-470, 633-635
<b>MEA-3.B.3:</b> A real interest rate can be calculated in hindsight by subtracting the actual inflation rate from the nominal interest rate.	<b>1.A:</b> Describe economic concepts, principles, or models.	327, 565, 633
<b>MEA-3.C.1:</b> Money is any asset that is accepted as a means of payment.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	31-32, 571, 575, 589-590, 605

<b>MEA-3.C.2:</b> Money serves as a medium of exchange, unit of account, and store of value.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	571, 605
<b>MEA-3.C.3:</b> The money supply is measured using monetary aggregates designated as M1 and M2.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	571-574
<b>MEA-3.C.4:</b> The monetary base (often labeled as M0 or MB) includes currency in circulation and bank reserves.	<b>1.B:</b> Identify an economic concept, principle, or model illustrated by an example.	571-573
<b>POL-2.A.1:</b> Depository institutions (such as commercial banks) organize their assets and liabilities on balance sheets.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	590-598, 607-613
<b>POL-2.A.2:</b> Depository institutions operate using fractional reserve banking.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	589-601
<b>POL-2.A.3:</b> Banks' reserves are divided into required reserves and excess reserves.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	591-593, 612
<b>POL-2.A.4:</b> Excess reserves are the basis of expansion of the money supply by the banking system.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	592-593, 594-596, 597-599, 601, 612-613
<b>POL-2.A.5:</b> The money multiplier is the ratio of the money supply to the monetary base.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	599, 612
<b>POL-2.A.6:</b> The size of expansion of the money supply depends on the money multiplier.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	599, 612-613
<b>POL-2.A.7:</b> The maximum value of the money multiplier can be calculated as the reciprocal of the required reserve ratio.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	599, 612
<b>POL-2.A.8:</b> The amount predicted by the simple money multiplier may be overstated because it does not take into account a bank's desire to hold excess reserves or the public holding more currency.	<b>3.C:</b> Determine the effect(s) of a change in an economic situation using quantitative data or calculations.	625
<b>MKT-3.A.1:</b> The demand for money shows the inverse relationship between the nominal interest rate and the quantity of money people want to hold.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	605-606
<b>MKT-3.A.2:</b> Given a monetary base determined by a country's central bank, money supply is independent of the nominal interest rate.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	605-606, 619-620
<b>MKT-3.B.1:</b> In the money market, equilibrium is achieved when the nominal interest rate is such that the quantities demanded and supplied of money are equal.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	605-606, 619-620
<b>MKT-3.C.1:</b> Disequilibrium nominal interest rates create surpluses and shortages in the money market. Market forces drive nominal interest rates toward equilibrium.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	619-620

<b>MKT-3.D.1:</b> Factors that shift the demand for money, such as changes in the price level, and supply of money, such as monetary policy, change the equilibrium nominal interest rate.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	327, 605-606, 619-620, 680
<b>POL-1.D.1:</b> Central banks implement monetary policies to achieve macroeconomic goals, such as price stability.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	107, 535, 576, 579-580, 582-583, 585, 608-613, 619-623, 626-627, 628, 662-664, 673, 680, 687-688
<b>POL-1.D.2:</b> The tools of monetary policy include open market operations, the required reserve ratio, and the discount rate. The most frequently-used monetary policy tool is open market operations.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	607-614, 621, 622, 685
<b>POL-1.D.3:</b> When the central bank conducts an open-market purchase (sale), reserves increase (decrease), thereby increasing (decreasing) the monetary base.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	607-611, 647
<b>POL-1.D.4:</b> The effect of an open-market purchase (sale) on the money supply is greater than the effect on the monetary base because of the money multiplier.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	599, 609-611
<b>POL-1.D.5:</b> Many central banks carry out policy to hit a target range for an overnight interbank lending rate. (In the United States, this is the federal funds rate.)	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	596, 614-616, 618-619, 623-624, 628, 633-635, 687-688
<b>POL-1.D.6:</b> Central banks can influence the nominal interest rate in the short run by changing the money supply, which in turn will affect investment and consumption.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	107, 327, 535, 609-623, 647, 679
<b>POL-1.D.7:</b> Expansionary or contractionary monetary policies are used to restore full employment when the economy is in a negative (i.e., recessionary) or positive (i.e., inflationary) output gap.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	615-623, 673, 687-688
<b>POL-1.D.8:</b> Monetary policy can influence aggregate demand, real output, the price level, and interest rates.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	615-623, 626-627, 662-664, 680
<b>POL-1.D.9:</b> A money market model and/or the AD-AS model are used to demonstrate the short-run effects of monetary policy.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	619-623

<b>POL-1.E.1:</b> In reality, there are lags to monetary policy caused by the time it takes to recognize a problem in the economy and the time it takes the economy to adjust to the policy action.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	624
<b>MKT-4.A.1:</b> The loanable funds market describes the behavior of savers and borrowers.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	323-325, 565-568
<b>MKT-4.A.2:</b> The demand for loanable funds shows the inverse relationship between real interest rates and the quantity demanded of loanable funds.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	323-324, 486-487, 565-566
<b>MKT-4.A.3:</b> The supply of loanable funds shows the positive relationship between real interest rates and the quantity supplied of loanable funds.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	323-324, 565-566
<b>MKT-4.B.1:</b> In the absence of international borrowing and lending, national savings is the sum of public savings and private savings.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	324-325, 565-566
<b>MKT-4.B.2:</b> For an open economy, investment equals national savings plus net capital inflow.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	568
<b>MKT-4.C.1:</b> In the loanable funds market, equilibrium is achieved when the real interest rate is such that the quantities demanded and supplied of loanable funds are equal.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	323-325, 565-568
<b>MKT-4.D.1:</b> Disequilibrium real interest rates create surpluses and shortages in the loanable funds market. Market forces drive real interest rates toward equilibrium.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	323-325, 566-568
<b>MKT-4.E.1:</b> The loanable funds market can be used to show the effects of government spending, taxes, and borrowing on interest rates.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	554, 558-560, 565-568
<b>MKT-4.E.2:</b> Factors that shift the demand (such as an investment tax credit) and supply (such as changes in saving behavior) of loanable funds change the equilibrium interest rate and the equilibrium quantity of funds.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	323-325, 488-489, 566-568
<b>Unit 5: Long-Run Consequences of Stabilization Policies</b>		
<b>POL-1.F.1:</b> A combination of expansionary or contractionary fiscal and monetary policies may be used to restore full employment when the economy is in a negative (i.e., recessionary) or positive (i.e., inflationary) output gap.	<b>2.B:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs when there are multiple contributing variables, or what multiple actions should be taken in order to achieve a specific economic outcome.	

<b>POL-1.F.2:</b> A combination of fiscal and monetary policies can influence aggregate demand, real output, the price level, and interest rates.	<b>2.B:</b> Using economic concepts, principles or models, explain how a specific economic outcome occurs when there are multiple contributing variables, or what multiple actions should be taken in order to achieve a specific economic outcome.	
<b>MOD-3.A.1:</b> The short-run trade-off between inflation and unemployment can be illustrated by the downward-sloping short-run Phillips curve (SRPC).	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	664-665
<b>MOD-3.A.2:</b> An economy is always operating somewhere along the SRPC.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	664-667
<b>MOD-3.A.3:</b> The long-run relationship between inflation and unemployment can be illustrated by the long-run Phillips curve (LRPC), which is vertical at the natural rate of unemployment.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	668-669
<b>MOD-3.A.4:</b> Long-run equilibrium corresponds to the intersection of the SRPC and the LRPC.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	668-669
<b>MOD-3.A.5:</b> Points to the left of long-run equilibrium represent inflationary gaps, while points to the right of long-run equilibrium represent recessionary gaps.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	668-669
<b>MOD-3.B.1:</b> Demand shocks correspond to movement along the SRPC.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	664-665
<b>MOD-3.B.2:</b> Supply shocks correspond to shifts of the SRPC.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	665-667
<b>MOD-3.B.3:</b> Factors that cause the natural rate of unemployment to change will cause the LRPC to shift.	<b>4.B:</b> Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.	461
<b>POL-3.A.1:</b> Inflation (deflation) results from increasing (decreasing) the money supply at too rapid of a rate for a sustained period of time.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	466, 467, 471, 473, 575-576, 679, 688
<b>POL-3.A.2:</b> When the economy is at full employment, changes in the money supply have no effect on real output in the long run.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	
<b>POL-3.A.3:</b> In the long run, the growth rate of the money supply determines the growth rate of the price level (inflation rate) according to the quantity theory of money.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	678-679, 687
<b>POL-3.B.1:</b> The government budget surplus (deficit) is the difference between tax revenues and government purchases plus transfer payments in a given year.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	107, 339-340, 544, 546, 552, 555
<b>POL-3.B.2:</b> A government adds to the national debt when it runs a budget deficit.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	107, 555

<b>POL-3.B.3:</b> A government must pay interest on its accumulated debt, thus increasing the national debt and increasingly forgoing using those funds for alternative uses.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	556-557, 558
<b>POL-3.C.1:</b> When a government is in budget deficit, it typically borrows to finance its spending.	<b>3.B:</b> Determine the effect(s) of one or more changes on other economic markets.	107, 339-340, 554-558, 567, 607, 609, 686
<b>POL-3.C.2:</b> A loanable funds market model can be used to show the effect of government borrowing on the equilibrium real interest rate and the resulting crowding out of private investment.	<b>3.B:</b> Determine the effect(s) of one or more changes on other economic markets.	558-560, 566-568
<b>POL-3.C.3:</b> Crowding out refers to the adverse effect of increased government borrowing, which leads to decreased levels of interest-sensitive private sector spending in the short run.	<b>3.B:</b> Determine the effect(s) of one or more changes on other economic markets.	339-340, 554, 558-560, 566-568, 686
<b>POL-3.C.4:</b> A potential long-run impact of crowding out is a lower rate of physical capital accumulation and less economic growth as a result.	<b>3.B:</b> Determine the effect(s) of one or more changes on other economic markets.	558-560, 566-568
<b>MEA-2.B.1:</b> Economic growth can be measured as the growth rate in real GDP per capita over time.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	402-403, 436
<b>MEA-2.B.2:</b> Aggregate employment and aggregate output are directly related because firms need to employ more workers in order to produce more output, holding other factors constant. This is captured by the aggregate production function.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	457-458, 461-463
<b>MEA-2.B.3:</b> Output per employed worker is a measure of average labor productivity.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	163, 443-444, 458, 529, 698
<b>MEA-2.B.4:</b> Productivity is determined by the level of technology and physical and human capital per worker.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	291-292, 443-447, 529
<b>MEA-2.B.5:</b> The aggregate production function shows that output per capita is positively related to both physical and human capital per capita.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	443-449
<b>MOD-1.C.1:</b> An outward shift in the PPC is analogous to a rightward shift of the long-run aggregate supply curve.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	662-663

<b>POL-4.A.1:</b> Public policies that impact productivity and labor force participation affect real GDP per capita and economic growth.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	554, 559-560, 626, 669-671, W67, W128-W129
<b>POL-4.A.2:</b> Government policies that invest in infrastructure and technology affect growth.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	488, 524, 530, 544, 554, 559-560, W35-W36, W67, W128-W129
<b>POL-4.A.3:</b> Supply-side fiscal policies affect aggregate demand, aggregate supply, and potential output in the short run and long run by influencing incentives that affect household and business economic behavior.	<b>2.A:</b> Using economic concepts, principles, or models, explain how a specific economic outcome occurs, or what action should be taken in order to achieve a specific economic outcome.	530, 669-673
<b>Unit 6: Open Economy – International Trade and Finance</b>		
<b>MEA-4.A.1:</b> The current account (CA) records net exports, net income from abroad, and net unilateral transfers.	<b>1.A:</b> Describe economic concepts, principles, or models.	722-724
<b>MEA-4.A.2:</b> The CA is not always balanced; it may show a surplus or a deficit. A nation's balance of trade (i.e., net exports) is part of the current account and may also show a surplus or a deficit.	<b>1.A:</b> Describe economic concepts, principles, or models.	506-507, 695, 722-724
<b>MEA-4.A.3:</b> The capital and financial account (CFA) records financial capital transfers and purchases and sales of assets between countries.	<b>1.A:</b> Describe economic concepts, principles, or models.	723-724
<b>MEA-4.A.4:</b> The CFA is not always balanced; it may show a surplus (financial capital inflow) or a deficit (financial capital outflow).	<b>1.A:</b> Describe economic concepts, principles, or models.	723-724
<b>MEA-4.A.5:</b> The balance of payments (BOP) is an accounting system that records a country's international transactions for a particular time period. It consists of the CA and the CFA.	<b>1.A:</b> Describe economic concepts, principles, or models.	721-724, 734
<b>MEA-4.A.6:</b> Any transaction that causes money to flow into a country is a credit to its BOP account, and any transaction that causes money to flow out is a debit. The sum of all credit entries should match the sum of all debit entries (CA+CFA=0).	<b>1.A:</b> Describe economic concepts, principles, or models.	721-724
<b>MKT-5.A.1:</b> In the foreign exchange market, one currency is exchanged for another; the price of one currency in terms of the other is the exchange rate.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	69-70, 524, 724-725
<b>MKT-5.A.2:</b> If one currency becomes more valuable in terms of the other, it is said to appreciate. If one currency becomes less valuable in terms of the other, it is said to depreciate.	<b>1.C:</b> Identify an economic concept, principle, or model using quantitative data or calculations.	70, 507, 524, 726
<b>MKT-5.B.1:</b> The demand for a currency in a foreign exchange market arises from the demand for the country's goods, services, and financial assets and shows the inverse relationship between the exchange rate and the quantity demanded of a currency.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	69-70, 724-725

<b>MKT-5.B.2:</b> The supply of a currency in a foreign exchange market arises from making payments in other currencies and shows the positive relationship between the exchange rate and the quantity supplied of a currency.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	69-70, 725
<b>MKT-5.C.1:</b> In the foreign exchange market, equilibrium is achieved when the exchange rate is such that the quantities demanded and supplied of the currency are equal.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	70, 724-725
<b>MKT-5.D.1:</b> Disequilibrium exchange rates create surpluses and shortages in the foreign exchange market. Market forces drive exchange rates toward equilibrium.	<b>4.A:</b> Draw an accurately labeled graph or visual to represent an economic model or market.	725-727
<b>MKT-5.E.1:</b> Factors that shift the demand for a currency (such as the demand for that country's goods, services, or assets) and the supply of a currency (such as tariffs or quotas on the other country's goods and services) change the equilibrium exchange rate.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	69-70, 724-727, 734-735
<b>MKT-5.E.2:</b> Fiscal policy can influence aggregate demand, real output, the price level, and exchange rates.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	568, 626-627, 727, 733
<b>MKT-5.E.3:</b> Monetary policy can influence aggregate demand, real output, the price level, and interest rates, and thereby affect exchange rates.	<b>4.C:</b> Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.	568, 626-627, 727, 733
<b>MKT-5.F.1:</b> Factors that cause a currency to appreciate cause that country's exports to decrease and its imports to increase. As a result, net exports will decrease.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	507, 524, 733, 736-737
<b>MKT-5.F.2:</b> Factors that cause a currency to depreciate cause that country's exports to increase and its imports to decrease. As a result, net exports will increase.	<b>3.A:</b> Determine the outcome of an economic situation using economic concepts, principles, or models.	507-508, 524, 733, 736-737
<b>MKT-5.G.1:</b> In an open economy, differences in real interest rates across countries change the relative values of domestic and foreign assets. Financial capital will flow toward the country with the relatively higher interest rate.	<b>3.B:</b> Determine the effect(s) of one or more changes on other economic markets.	568, 727, 733, 737
<b>MKT-5.G.2:</b> Central banks can influence the domestic interest rate in the short run, which in turn will affect net capital inflows.	<b>3.B:</b> Determine the effect(s) of one or more changes on other economic markets.	568, 627, 680, 727, 733