LO.a: Describe the business cycle and its phases.

1. Assume economic activity is decelerating, inflation is accelerating, and businesses have slowed their rate of hiring. The economy is *most likely* in which phase of the business cycle?
   A. Peak.
   B. Late expansion.
   C. Early expansion.

2. Two analysts make the following statements:
   Analyst 1: Recessions start when the central bank runs out of foreign reserves.
   Analyst 2: Recessions start when real GDP has two consecutive quarters of negative growth.
   Which analyst's statement is *most likely* correct?
   A. Analyst 1.
   B. Analyst 2.
   C. Both.

3. During the early expansion phase of a business cycle, inflation is *most likely* to:
   A. pick up modestly.
   B. decelerate but with a lag.
   C. remain moderate and may continue to fall.

4. A recession is *least likely* associated with:
   A. rising unemployment.
   B. declining capital spending.
   C. stable inflation.

5. In a business cycle, a trough is *most likely* to be followed by a/an:
   A. contraction.
   B. expansion.
   C. peak.

6. The unemployment rate is *most likely* to rise during which phase of the business cycle?
   A. contraction.
   B. early expansion.
   C. peak.

7. An analyst states that 'Inflation picks up modestly during this phase of the business cycle.' Which phase is she *most likely* referring to?
   A. Contraction
   B. Early expansion
   C. Late expansion

8. Which of the following statements with respect to the boom phase of the economic cycle are *most likely* correct?
   I. Demand for factors of production may exceed supply and hence the economy may experience shortages.

    II.   Companies might over-invest in production capacity and this could possibly trigger the next recession.

A. Statement I.

B. Statement II.

C. Both.

LO.b: Describe how resource use, housing sector activity, and external trade sector activity vary as an economy moves through the business cycle.

9. Which of the following goods is *most likely* to have the most pronounced cyclical behavior?
   A. Durable goods.
   B. Non-durable goods.
   C. Services

10. Analysts closely follow new orders for capital equipment to understand an economy's trend, but exclude defense and aircraft orders. The *most likely* reason is:
   A. to avoid double counting.
   B. the military is considered public sector.
   C. defense and airlines tend to place large infrequent orders delivered over multiple years, which create a false signal for the index.

11. Construction orders are less sensitive to business cycles as compared to equipment orders because:
   A. business values light equipment less than structures and heavy machinery.
   B. they are difficult to cancel as compared to equipment orders.
   C. businesses are uncertain about cyclical directions.

12. Inventories can reflect growth because they:
   A. determine the availability of goods for sale.
   B. fluctuate dramatically over the business cycle.
   C. reflect general business sentiment.

13. Two analysts made the following statements:
   Analyst 1: Inventories tend to rise when inventory-sales ratios are low.
   Analyst 2: Inventories tend to rise when inventory-sales ratios are high.
   Which analyst is *most likely* correct?
   A. Analyst 1.
   B. Analyst 2.
   C. Neither   .

14. Inventory levels decline early in a recovery because:
   A. businesses increase production because of increased economic activity.
   B. sales outstrip production.
   C. businesses need profit.

15. Which of the following goods have a *longer* useful life?

A. Appliances.
B. Medicine.
C. Clothing.

16. Temporary earnings fluctuations *least likely* provide a guide to:
    A. savings rate.
    B. spending on services.
    C. spending on durable goods.

17. Housing sector is *more* sensitive than other sectors to which of the following?
    A. Interest rates.
    B. Government spending.
    C. Permanent income.

18. Buying a house *most likely* reflects:
    A. Affordability, the rate of family formation and speculation on housing prices.
    B. the rate of family formation.
    C. speculation on housing prices.

19. Imports *most likely* respond to:
    A. pace of global growth.
    B. the level of exports.
    C. pace of domestic GDP growth.

20. Exports *most likely* respond to:
    A. the level of imports.
    B. pace of global growth.
    C. pace of domestic GDP growth.

LO.c: Describe theories of the business cycle.

21. The real business cycle (RBC) model *most likely* suggests that:
    A. monetary variables have a major impact on GDP growth.
    B. individuals are unemployed because their asking wages are too high.
    C. governments should intervene when the economy is in contraction.

22. Which of the following is the main difference between New Classical and Neo-Keynesian models?
    A. New Classical models are monetarist, whereas Neo-Keynesian models are not.
    B. New Classical models use utility-maximizing agents, whereas Neo-Keynesian does not.
    C. New Classical models assume that prices adjust quickly to changes in supply and demand, whereas Neo-Keynesians assume that prices adjust slowly.

23. Two analysts make the following statements:
    Analyst 1: The Austrian economic school attributes the primary cause of business cycle to misguided government intervention.

Analyst 2: The Austrian economic school attributes the primary cause of business cycle to sticky price wage and wage expectations that exaggerate trends.
The statement made by which analyst is *most likely* correct?
A. Analyst 1.
B. Analyst 2.
C. Neither.

24. Which of the following business cycle models suggests that government should not intervene with monetary and fiscal policy?
A. Neoclassical model.
B. Keynesian model.
C. Monetarist model.

25. Monetarists advocate a very limited role for the government because they believe:
A. firms take time to adjust to systemic shocks to the economy.
B. government policies operate with a lag.
C. resource use is efficient with marginal revenue and cost equal.

26. Which of the following causes persistent unemployment in a basic RBC model?
A. Contractionary monetary policy causes a shock to real variables.
B. An individual's utility function who prefers leisure over consumption.
C. The economy returns to equilibrium promptly, thus persistent unemployment does not exist.

27. Which of the following concepts was covered by the Austrian school of thought, but not by the Neoclassical school of thought to explain the business cycle?
A. Interest for capital.
B. Money as a medium of exchange.
C. Wages paid to labor.

28. Which of the following is *most likely* a concept covered by the original Keynesian school of thought and not by the Neoclassical school?
A. Animal spirit.
B. Domino effect.
C. Sticky wages.

29. Which of the following is *least likely* to be a criticism of the Keynesian fiscal policy?
A. Government finances can move out of control due to greater debt.
B. Keynesian polices focus on the longer term.
C. Fiscal policy takes time to implement.

30. The Monetarists are *least likely* to criticize which of the following with respect to the Keynesian school of thought?
A. Keynesian model fails to recognize the importance of money supply.
B. Keynesian short term view fails to account for the long term costs of government intervention.

C. Keynesian policies fail to stimulate the economy even in the short-term.

LO.d: Describe types of unemployment and measures of unemployment.

31. Assuming that the working-age population is constant, if the labor force participation ratio declines while the number of people employed remains unchanged, the unemployment rate will most likely:
    A. increase.
    B. decrease.
    C. remain unchanged.

32. The following information applies to an economy:

Total population	2,200
Working age population	1,950
Labor force	1,500
Underemployed	240
Unemployed	190
Discouraged workers	160
Frictionally unemployed	50
Voluntarily unemployed	80

The unemployment rate in the economy is *closest* to:
    A. 9.7%.
    B. 12.6%.
    C. 16.0%.

33. The unemployment rate is *best* described as the ratio of unemployed to:
    A. labor force minus frictionally unemployed.
    B. total population of people who are of working age.
    C. labor force.

34. Two analysts make the following statements:
    Analyst 1: Comparisons of unemployment among countries are impossible.
    Analyst 2: Comparisons of unemployment among countries must take into account different unemployment measurement methods.
    Which analyst's statement is *most likely* true?
    A. Analyst 1.
    B. Analyst 2.
    C. Neither.

35. Which of the following is the *most* appropriate reason why unemployment lags business cycle?
    A. Businesses are reluctant to dismiss and hire workers.
    B. Workers must give notice to employers before quitting jobs.
    C. It takes time to compile the employment data.

36. In a downturn, productivity *most likely*:
    A. falls.
    B. rises.
    C. remains the same.

37. The activity or participation ratio is a ratio of:
    A. labor force to total population of working age.
    B. employed population to total population of working age.
    C. actively seeking employment population to total population of working age.

38. Hidden unemployment is *least likely* to include:
    A. discouraged workers.
    B. underemployed workers.
    C. voluntarily unemployed.

LO.e: Explain inflation, hyperinflation, disinflation, and deflation.

39. Observations of inflation rate alone cannot be used to determine:
    A. deflation.
    B. stagflation.
    C. hyperinflation.

40. A decline in inflation, but still above zero level, is *best* known as :
    A. deflation.
    B. stagflation.
    C. disinflation.

41. Which of the following terms *best* describe a situation when inflation rate is less than zero percent?
    A. deflation.
    B. stagflation.
    C. disinflation.

42. Cordoba's economy slowed down due to a high inflation rate and a high level of unemployment. Which of the following did the economy of Cordoba *most likely* experience?
    A. Disinflation.
    B. Hyperinflation.
    C. Stagflation.

LO.f: Explain the construction of indices used to measure inflation.

43. The table below shows data of consumption baskets and prices for two years 2013 and 2014:

Goods	2013		2014	
	Quantity	Price	Quantity	Price
1 lb tea	100 lb	$3.6	130 lb	$3.9
1 l milk	900 l	$2.5	950 l	$3.2

| Apple (each) | 300 | $3.1 | 300 | $3.3 |

The value of the Paasche index is *closest* to:
   A. 120.24.
   B. 120.28.
   C. 120.33.

44. The table below shows data of consumption baskets and prices for two years 2013 and 2014:

Goods	2013		2014	
	Quantity	Price	Quantity	Price
1 lb tea	100 lb	$3.6	130 lb	$3.9
1 l milk	900 l	$2.5	950 l	$3.2
Apple (each)	300	$3.1	300	$3.3

The Laspeyres index is *closest* to:
   A. 120.24.
   B. 120.28.
   C. 120.33.

45. The table below shows consumption baskets and prices for two years 2013 and 2014:

Goods	2013		2014	
	Quantity	Price	Quantity	Price
1 lb tea	100 lb	$3.6	130 lb	$3.9
1 l milk	900 l	$2.5	950 l	$3.2
Apple (each)	300	$3.1	300	$3.3

The Fisher index is *closest* to:
   A. 120.24.
   B. 120.28.
   C. 120.33.

46. A price index created by holding the composition of the consumption basket constant in an inflationary environment tends to:
   A. overstate the actual cost of living.
   B. understate the actual cost of living.
   C. accurately track the actual cost of living.

47. The use of a fixed basket of goods and services to measure price indices will *least likely* result in:
   A. Quality bias.
   B. Quantity bias.
   C. Substitution bias.

48. Which of the following statements regarding price indices is *least likely* correct?
   A. The Fisher index is an arithmetic mean of the Laspeyres index and the Paasche index.

B. The Laspeyres index is a price index created by using a fixed basket of goods and services.

C. An upward bias in the inflation rate is created when new products are not included in the fixed basket of goods and services.

LO.g: Compare inflation measures, including their uses and limitations.

49. Policymakers often focus on core inflation when evaluating trends in the economy and making policy decisions. This is because:
A. core inflation is less volatile compared to headline inflation.
B. core inflation includes energy and food prices.
C. is a better indicator of overall price changes compared to headline inflation.

50. Which of the following statements is *least accurate*?
A. The PPI category weights can vary more widely than analogous CPI terms.
B. The PPI can influence the future CPI.
C. The PPI is used more frequently than CPI as a benchmark for adjusting labor contract payments.

LO.h: Distinguish between cost-push and demand-pull inflation.

51. In the short –run, a demand-pull inflation will *most likely* result in an increase in:
A. employee wages.
B. finished good prices.
C. commodity prices.

52. A disease that increases employee illness will *most likely* increase:
A. demand-pull inflation.
B. cost-push inflation
C. cost-pull inflation.

53. Two analysts made the following statements:
Analyst 1: Cost-push inflation most likely occurs when unemployment rates are low.
Analyst 2: Cost-push inflation most likely occurs when unemployment rate are high.
Which analyst is *most likely* correct?
A. Analyst 1.
B. Analyst 2.
C. Neither.

54. Which of the following factors contribute the *most* towards cost push inflation?
A. Capital expenditure.
B. Raw material cost.
C. Wages.

LO.i: Describe economic indicators, including their uses and limitations.

55. Which of the following would be *most* useful as a leading indicator to signal the start of an economic recovery?
    A. An increase in the industrial production index.
    B. An increase in the S&P 500 stock index.
    C. A decrease in the inventory – sales ratio.

56. Which of the following is *not* thought to be a lagging indicator for the US economy?
    A. Unit labor costs.
    B. Commercial and industrial loans.
    C. Average weekly initial claims for unemployment insurance.

57. A wider interest rate spread between 10-year treasury yields and overnight borrowing rates indicate an economic:
    A. upswing.
    B. downswing.
    C. stability.

58. Which of the following statements about economic indicators is *most likely* true?
    A. Inventory sales ratio is considered a coincident indicator because inventories start accumulating even with a slight dip in sales.
    B. Money supply is considered a lagging indicator because monetary policy takes time to be implemented.
    C. The stock index level is considered a leading indicator because stock movements offer a useful early signal on economic cycles.

Solutions

1. A is correct. The peak phase is characterized by deceleration of economic activity, acceleration of inflation and a slowdown in hiring rate.

2. B is correct. Recessions start when real GDP has two consecutive quarters of negative growth.

3. C is correct. During the early expansion phase of a business cycle, inflation remains moderate and may continue to fall.

4. C is correct. A recession is associated with decelerating inflation.

5. B is correct. A trough is followed by an expansion.

6. A is correct. The unemployment rate rises in contraction, remains high in early expansion, and falls during peak.

7. C is correct. Inflation remains moderate but may fall during an early expansion. Generally, inflation picks up modestly during a late expansion, and decelerates with a lag during a contraction.

8. C is correct. Both statements are correct. The economy may face shortages because the demand for factors of production exceeds the supply. Furthermore, companies might overinvest in production capacity which can result in idling machines and workers if the economic growth slows down.

9. A is correct. Durable goods have a long useful life in comparison to non-durables and services. Therefore, consumers tend to delay purchase when economic outlook is not favorable.

10. C is correct. Business cycle indicators need to represent the activities in the whole economy and this should not be influenced by some particular sectors that may have uncorrelated fluctuations.

11. B is correct. It usually takes much longer time to plan and complete large construction projects than for equipment orders.

12. B is correct. Inventory level tend to forcefully move up or down.

13. A is correct. When the economy starts to recover, sales of inventories can outpace production, which results in low inventory-sales ratios. Companies then need to build inventory to meet demand.

14. B is correct. Companies are slow to increase production in early recovery phase because they want to first confirm that the recession is over.

15. A is correct. Appliances are durable goods whose life span can be extended with repairs. So consumers tend to delay replacement when the economic outlook is not favorable. Food and clothing are non-durable goods.

16. B is correct. Households adjust services consumption based on perceived permanent income level rather than temporary earning fluctuations. Savings rate and durable good consumption are more related to the short-term uncertainties caused by recession.

17. A is correct. Real estate purchases are usually financed with mortgage loans hence interest rate changes directly influence the monthly payment amounts.

18. A is correct. Family formation constitutes the actual need for housing, whereas speculation on housing prices reflects the fact that real estate has investment value.

19. C is correct. Imports reflect the domestic needs for foreign goods, which vary together with domestic economic growth.

20. B is correct. Exports reflect the foreign demands on domestic output, which depend on the conditions of global economy.

21. B is correct. As suggested by the earliest RBC models, a person is unemployed because he or she is asking for wages that are too high.

22. C is correct. A key feature of Keynesian macroeconomics is the stickiness of prices. In contrast, Classical views assume flexible price adjustments that ensure market clearing.

23. A is correct. The Austrian economic school attributes the primary cause of business cycle to misguided government intervention.

24. A is correct. The recommended policy of the Neoclassical model is that government should not intervene with monetary and fiscal policy.

25. B is correct. Monetarists believe that policy effects typically occur long after the need for which they were implemented. By the time the policy has an impact the original issue might no longer be relevant.

26. B is correct. This is because shocks in the standard New Classical model can only have a temporary effect. Unemployment can still exist when the labor market is cleared.

27. B is correct. The Austrian school shared some views with the Neoclassical school but also addressed two additional areas: 1) role of government and 2) money as a medium of exchange.

28. C is correct. Sticky wages was a concept covered by the Keynesian school of thought.

29. B is correct. Keynesian cyclical policies are focused on the short-term, not the long-term. The other two options represent valid criticisms.

30. C is correct. Monetarists are likely to raise the criticisms expressed in options A and B.

31. B is correct. For a given working-age population, a decline in the labor force participation rate, which is often the result of an increase in discouraged workers, reduces the labor force. If the number of people employed remain the same while the labor force is smaller, the number of workers defined to be unemployed must be smaller and the unemployment rate lower.

32. B is correct. Unemployment rate = Unemployed/Labor force * 100 = 190/1500 * 100 = 12.6%.

33. C is correct. The unemployment rate is the ratio of unemployed to labor force.

34. B is correct. Different countries use different statistical scope and ratio definitions and these differences have to be reconciled before meaningful conclusions can be made from cross-country comparisons.

35. A is correct. To reduce costs related to hiring and firing, businesses are reluctant to dismiss and hire workers.

36. A is correct. Because employers like to keep the workforce relatively stable, productivity falls as output declines in a downturn because it is measured as the ratio of output over hours worked.

37. A is correct. Activity ratio is the ratio of labor force (employed + actively seeking employment) to total population of working age.

38. C is correct. Hidden unemployment includes discouraged workers and underemployed workers. It does not include voluntarily unemployed.

39. B is correct. A high inflation rate alone does not indicate stagflation, which happens if high unemployment occurs together with high inflation.

40. C is correct. Disinflation is known as reduction of inflation from a higher to lower, but still above zero, level.

41. A is correct. Deflation corresponds to a negative inflation rate.

42. C is correct. Stagflation is an economic state resulting from a combination of a high inflation rate and a high level of unemployment.

43. A is correct. The Paasche index uses the current consumption of the basket.
= (130 * 3.9 + 950 * 3.2 + 300 * 3.3) / (130 * 3.6 + 950 * 2.5 + 300 * 3.1) * 100 = 120.24.

44. C is correct. The Laspeyres index assumes that the composition of consumption basket is constant.
= (100 * 3.9 + 900 * 3.2 + 300 * 3.3) / (100 * 3.6 + 900 * 2.5 + 300 * 3.1) * 100 = 120.33.

45. B is correct.
Fisher index is the geometric mean of Laspeyres and Paasche index
The Laspeyres index assumes that the composition of consumption basket is constant.
= (100 * 3.9 + 900 * 3.2 + 300 * 3.3) / (100 * 3.6 + 900 * 2.5 + 300 * 3.1) * 100 = 120.33.

The Paasche index uses the current consumption of the basket.
= (130 * 3.9 + 950 * 3.2 + 300 * 3.3) / (130 * 3.6 + 950 * 2.5 + 300 * 3.1) * 100 = 120.24.

Fisher index = $(120.33 * 120.24)^{0.5}$ = 120.28.

46. A is correct. In a Laspeyres index upward biases such as substitution bias and quality bias tend to overstate the actual cost of living.

47. B is correct. Using a fixed basket of goods and services to measure price indices results in three biases: substitution bias, quality (not quantity) bias, and new product bias.

48. A is correct. The Fisher index is a geometric mean of the Laspeyres index and the Paasche index.

49. A is correct. Core inflation excludes food and energy prices. It is therefore less volatile compared to headline inflation.

50. C is correct. The CPI is typically used for this purpose, while the PPI is more closely connected to business contracts.

51. C is correct. The effect of demand-pull inflation is an increase in the aggregate demand, which in turn, leads to an increase in commodity prices in the short run.

52. B is correct. By increasing employee illness, the disease will decrease the output per hour per worker, which will increase the unit labor cost. As, the unit labor cost increases, cost-push inflation increases.

53. A is correct. When unemployment is below NAIRU, there is a shortage of labor that pushes up labor cost.

54. C is correct. This is because wages generally represent the biggest cost for most business. Cost-push inflation is also known as wage-push inflation.

55. B is correct. S&P 500 index is a leading indicator of economic activity and an increase in it is an indicator of rehiring at the start of a recovery.

56. C is correct. The average weekly initial claims for unemployment insurance is a leading indicator.

57. A is correct. Because long-term yields express market expectations about the direction of short-term interest rates, and rates ultimately follow the economic cycle up and down, a wider spread, by anticipating short rate increases, also anticipates an economic upswing.

58. C is correct. The stock prices are based on expected future performance. Inventory sales ratio is a lagging indicator because inventories accumulate as sales initially decline and become depleted as sales pick up. Money supply is a leading indicator measuring the tightness or looseness of monetary policy.