1. What are the primary defining characteristics of macroeconomics? *(Select all that apply.)*

- [ ] **A.** It is particularly focused on long-run growth and business cycles.
- [ ] **B.** It deals with the overall effects on economies of the choices that all economic agents make.
- [ ] **C.** It focuses on the choices of individual consumers and firms.
- [ ] **D.** It is the study of the behaviour of large collections of economic agents.
- [ ] **E.** It is particularly focused on the objectives, constraints, and interactions of consumers and firms.

---

2. In a graph of the natural logarithm of an economic time series, what does the slope of the graph represent?

- ○ **A.** The approximate growth rate of the time series (when the growth rate is large)
- ○ **B.** The approximate deviation from the trend component of the time series
- ○ **C.** The approximate growth rate of the time series (when the growth rate is small)
- ○ **D.** The approximate trend component of the time series

---

3. What is the difference between the trend[1] and the business cycle[2] component of an economic time series?

The trend component corresponds to (1) _____ while the business cycle component corresponds to (2) _____

1: Definition

trend: The smooth growth path around which an economic variable cycles

2: Definition

business cycles: Short-run ups and downs, or booms and recessions, in aggregate economic activity

(1)
- an estimate of what the data would be if a proposed policy were implemented,
- the deviation from a smooth fit to the data,
- a smooth fit to the data,
- the actual observed data,

(2)
- the deviation from a smooth fit to the data.
- a smooth fit to the data.
- the actual observed data.
- an estimate of what the data would be if a proposed policy were implemented.

4. Why should a macroeconomic model[3] be simple? Choose the correct answer below.

- **A.** It would be too complicated for a model to specify the consumers and firms that interact in the economy, the set of goods that consumers want to consume, consumers' preferences over goods, the technology available to firms for producing goods, and the resources available.
- **B.** Simple models are most effectively able to analyze economic problems beyond those for which the model was constructed.
- **C.** Simple models are most useful because the purpose of an economic model is to capture the essential features needed for analyzing a particular economic problem.
- **D.** Creating a macroeconomic model that is not simple would require that the model be an abstraction.

3: Definition

economic model: A description of consumers and firms, their objectives and constraints, and how they interact

5. What are the five elements that make up the basic structure of a macroeconomic model[4]? *(Select all that apply.)*

- ☐ **A.** The technology available to firms for producing goods
- ☐ **B.** The costs of transportation
- ☐ **C.** The consumers and firms that interact in the economy
- ☐ **D.** The set of goods that consumers want to consume
- ☐ **E.** The tools available to governments and central banks for implementing policy
- ☐ **F.** Consumers' preferences over goods
- ☐ **G.** The resources available
- ☐ **H.** Governments' preferences over growth and stability
- ☐ **I.** The assets that act as media of exchange

4: Definition

economic model: A description of consumers and firms, their objectives and constraints, and how they interact.

---

6. Which of the following correctly represents the relationship between real and nominal interest rates?

- ○ **A.** Real rate = Nominal rate × Inflation.
- ○ **B.** Nominal rate = Real rate − Inflation.
- ○ **C.** Nominal rate = Real rate + Inflation.
- ○ **D.** Real rate = Nominal rate + Inflation.

If the actual inflation rate is greater than the expected inflation rate, borrowers will be (1) _____.

(1)
- ○ unaffected
- ○ worse off
- ○ better off

---

7. Assume an economy with two firms. Firm A produces wheat and firm B produces bread. In a given year, firm A produces 5000 tonnes of wheat, sells 2000 tonnes of wheat to firm B at $30 per tonne, exports 2500 tonnes of wheat at $30 per tonne, and stores 500 tonnes as inventory. Firm A pays $50,000 in wages to consumers. Firm B produces 50,000 loaves of bread and sells all of it to domestic consumers at $2 per loaf. Firm B pays consumers $20,000 in wages. In addition to the 50,000 loaves of bread consumers buy from firm B, consumers import and consume 15,000 loaves of bread, and they pay $1 per loaf for this imported bread. Calculate gross domestic product[5] using the income approach[6].

Using the income approach, profits for firm A are $ [ ], profits for firm B are $ [ ], total wages are $ [ ], and GDP in this economy is $ [ ].

5: Definition

gross domestic product (GDP): The dollar value of final output produced during a given period of time within a country's borders

6: Definition

income approach: The approach to GDP measurement that determines GDP as the sum of all incomes received by economic agents contributing to production

---

8. Explain the concept of value added.

- **A.** Value added is the value of all intermediate goods used in production.
- **B.** Value added is the value of all goods produced.
- **C.** Value added is the same as net exports.
- **D.** Value added is the value of goods produced, minus the value of intermediate goods used in production.

---

9. In year 1 and year 2, there are two products produced in a given economy: computers and bread. Suppose that there are no intermediate goods. In year 1, 25 computers are produced and sold at $1500 each, and in year 2, 35 computers are produced and sold at $2000 each. In year 1, 20,000 loaves of bread are sold for $1 each, and in year 2, 16,000 loaves of bread are sold for $1.70 each.

Using the chain-weighting method, real GDP in year 2 (in year 1 dollars) is $ [ ], and the percentage increase in real GDP from year 1 to year 2 is [ ] %.

(Round responses for real GDP to the nearest integer as needed, and round your response for the percentage increase to two decimal places as needed.)

---

10. Suppose that the government deficit[7] is 25, interest on the government debt is 20, taxes are 80, government expenditures[8] are 60, consumption[9] expenditures are 75, net factor payments are 20, the current account surplus[10] is −10, and national saving[11] is 10. Calculate the following (not necessarily in the order given):

a. Private disposable income[12] =

b. Transfers[13] from the government to the private sector =

c. Gross national product[14] =

d. Gross domestic product[15] =

e. The government surplus[16] =

f. Net exports[17] =

g. Investment[18] expenditures =

7: Definition

government deficit: The negative of the government surplus

8: Definition

government expenditures: Expenditures by the federal, provincial or territorial, and municipal governments on final goods and services

9: Definition

consumption: Goods and services produced and consumed during the current period

10: Definition

current account surplus: Net exports plus net factor payments from abroad

11: Definition

national saving: Private sector saving plus government saving

12: Definition

private disposable income: GDP plus net factor payments, plus transfers from the government, plus interest on the government debt, minus taxes

13: Definition

transfers: Government outlays that are transfers of purchasing power from one group of private economic agents to another

14: Definition

gross national product (GNP): GNP = GDP + Net factor payments to Canadian residents from abroad

15: Definition

gross domestic product (GDP): The dollar value of final output produced during a given period of time within a country's borders

16: Definition

government surplus: Identical to government saving

17: Definition

net exports: Expenditures on domestically produced goods and services by foreigners (exports) minus expenditures on foreign-produced goods and services by domestic residents (imports)

18: Definition

investment: Goods produced in the current period but not consumed in the current period

11. **[Related to *Solved Problem 2.2A*]** Use the information in the following table to calculate nominal and real GDP for 2005 and 2013. Assume that 2005 is the base year.

	2005		2013	
Product	**Quantity**	**Price**	**Quantity**	**Price**
Oranges	200	$0.50	240	$0.75
Plums	90	$0.50	85	$0.60
Haircuts	5	$30.00	8	$32.00
Pizza	72	$9.00	82	$9.25

Nominal GDP in 2005 is $ [ ]. *(Round your response to two decimal places.)*

Real GDP in 2005 is $ [ ]. *(Round your response to two decimal places.)*

Nominal GDP in 2013 is $ [ ]. *(Round your response to two decimal places.)*

Real GDP in 2013 is $ [ ]. *(Round your response to two decimal places.)*

12. What is the primary defining feature of business cycles?

The primary defining feature of business cycles is (1) _____ in (2) _____

(1)
- they are the same as the trend
- they are straight lines above the trend
- they are straight lines below the trend
- they fluctuate about trend

(2)
- employment.
- real gross domestic product.
- gross domestic product.

---

13. Besides persistence[19], what are three important features of the deviations from trend in GDP? *(Select all that apply.)*

- **A.** There is no regularity in the amplitude of fluctuations in real GDP about trend.
- **B.** The percentage deviation from trend is always between −1 and 1.
- **C.** The duration of all peaks and troughs is exactly one year.
- **D.** The time series of deviations from trend in real GDP is quite choppy.
- **E.** There is no regularity in the frequency of fluctuations in real GDP about trend.

19: Definition

persistent: Describes an economic time series that tends to stay above (below) trend when it has been above (below) trend during the recent past

---

14. **Business cycle facts:**

Expenditure on durable goods is more like expenditure on (1) _____ while expenditure on nondurable goods is more like expenditure on (2) _____ Investment tends to have (3) _____ variability relative to GDP which is demonstrated by a (4) _____ Consumption tends to have (5) _____ variability relative to GDP which is demonstrated by a (6) _____

(1)
- consumption,
- investment,

(2)
- consumption.
- investment.

(3)
- larger
- smaller

(4)
- smaller correlation coefficient.
- larger correlation coefficient.
- smaller standard deviation.
- larger standard deviation.

(5)
- larger
- smaller

(6)
- larger standard deviation.
- larger correlation coefficient.
- smaller correlation coefficient.
- smaller standard deviation.

15. How can we discern positive[20] and negative correlation[21] in a time series[22] plot?

- **A.** Two time series are positively correlated when one series is high (low) and the other series is low (high). Two time series that are negatively correlated show one series high (low) when the other series is high (low).
- **B.** In a positive correlation, you will look for the two different time series to have the same maximum heights above the trend. In a negative correlation, you will look for the two different times series to have the same minimum heights.
- **C.** In a positive correlation, you will look for the two different time series to have the same minimum heights above the trend. In a negative correlation, you will look for the two different times series to have the same maximum heights.
- **D.** Two time series are positively correlated when one series is high (low) and the other series is high (low). Two time series that are negatively correlated show one series high (low) when the other series is low (high).

How can we discern positive and negative correlation in a scatter plot[23]?

- **A.** The correlation is determined by the slope of a straight line that best fits the points in the scatter plot. A positive correlation will contain a positive sloped line, and a negative correlation will contain a negative sloped line.
- **B.** The correlation is determined by the slope of a straight line that best fits the points in the scatter plot. A positive correlation will contain a negative sloped line, and a negative correlation will contain a positive sloped line.
- **C.** The correlation is determined by the positioning of points along the best fit line. If more points are above the line, then the correlation is positive. If more points are below the line, then the correlation is negative.
- **D.** The correlation is determined by the positioning of points along the best fit line. If more points are above the line, then the correlation is negative. If more points are below the line, then the correlation is positive.

20: Definition

positive correlation: Relationship between two economic time series when a straight line fit to a scatter plot of the two variables has a positive slope

21: Definition

negative correlation: Relationship between two economic time series when a straight line fit to a scatter plot of the two variables has a negative slope

22: Definition

time series: Sequential measurements of an economic variable over time

23: Definition

scatter plot: A plot of two variables, x and y, with x measured on the horizontal axis, and y measured on the vertical axis

16. Why is the index of leading economic indicators[24] useful for forecasting GDP?

- **A.** The index can provide information on future inflation rates.
- **B.** The index can provide useful information on the turning points in aggregate economic activity.
- **C.** The index is important in determining whether a trend is procyclical or countercyclical.
- **D.** The index tells forecasters what future government spending is going to look like.

24: Definition

composite index of business leading indicators or **index of leading indicators:** A weighted average of leading macroeconomic variables, which is sometimes used to forecast the deviations of real GDP from trend

17. What are the three features of comovement[25] that macroeconomists are interested in? *(Select all that apply.)*

- **A.** If a series of data has a positive or negative correlation
- **B.** If a trend is more or less variable relative to real GDP
- **C.** If a trend is predicted to have a boom or bust
- **D.** Whether a variable is leading or lagging
- **E.** Whether a variable is procyclical or countercyclical
- **F.** If a series of data better fits a time series or scatter plot

25: Definition

comovement: How aggregate economic variables move together over the business cycle

18. Describe the key business cycle[26] regularities in consumption and investment expenditures.

- **A.** Both consumption and investment expenditures are countercyclical. In contrast to consumption, investment is much more volatile than is GDP.
- **B.** Both consumption and investment expenditures are countercyclical. In contrast to investment, consumption is much more volatile than is GDP.
- **C.** Both consumption and investment expenditures are procyclical. In contrast to investment, consumption is much more volatile than is GDP.
- **D.** Both consumption and investment expenditures are procyclical. In contrast to consumption, investment is much more volatile than is GDP.

26: Definition

business cycles: Fluctuations about trend in real GDP

---

19. What are the key business cycle[27] regularities in the labour market?

- **A.** In the labour market, employment is procyclical, coincident, and more variable than real GDP. Real wage is procyclical, and average labour productivity is procyclical, leading, and more variable than real GDP.
- **B.** In the labour market, employment is countercyclical, lagging, and more variable than real GDP. Real wage is countercyclical, and average labour productivity is procyclical, leading, and less variable than real GDP.
- **C.** In the labour market, employment is countercyclical, leading, and more variable than real GDP. Real wage is coincident, and average labour productivity is procyclical, leading, and more variable than real GDP.
- **D.** In the labour market, employment is procyclical, lagging, and less variable than real GDP. Real wage is procyclical, and average labour productivity is procyclical, coincident, and less variable than real GDP.

27: Definition

business cycles: Fluctuations about trend in real GDP

---

20. We have measured average labour productivity[28] as Y/N, where Y is real GDP and N is employment. The business cycle[29] facts concerning employment relate to how the denominator N comoves[30] with the numerator Y, and those concerning average labour productivity relate to how Y/N comoves with Y. Explain how the business cycle facts concerning employment and average labour productivity in the accompanying tables are consistent.

	Correlation Coefficient (GDP)	Std. (% of S.D
Consumption	0.78	83
Investment	0.81	5(
Employment	0.79	8
Average labour productivity	0.65	6

	Cyclicality	Lead/Lag	Va Relat
Consumption	Procyclical	Coincident	S
Investment	Procyclical	Coincident	I
Employment	Procyclical	Lagging	S
Real wage rate	Procyclical	?	
Average labour productivity	Procyclical	Coincident	S

Employment N is (1) _____ Therefore, in a boom (recession), (2) _____ However, since output is more variable than employment, Y/N is (3) _____ since Y will typically (4) _____

28: Definition

average labour productivity: Total output divided by labour input

29: Definition

business cycle: Fluctuations about trend in real GDP

30: Definition

comovement: How aggregate economic variables move together over the business cycle

(1)
- ○ acyclical.
- ○ procyclical.
- ○ countercyclical.

(2)
- ○ output Y would increase (decrease) and N would decrease (increase).
- ○ both increase (decrease).
- ○ both decrease (increase).
- ○ output Y would decrease (increase) and N would increase (decrease).

(3)
- ○ acyclical
- ○ countercyclical
- ○ procyclical

(4)
- ○ decrease (increase) while N increases (decreases) during a boom (recession).
- ○ increase (decrease) while N decreases (increases) during a boom (recession).
- ○ increase (decrease) proportionally more than N during a boom (recession).

21. Consumption of durables is more variable relative to trend than consumption of semi-durables, and consumption of semi-durables is more variable relative to trend than consumption of nondurables and services. Speculate on why we observe these phenomena, and relate this to the key business cycle[31] facts in the tables shown to the right.

Expenditure on durable goods is more like expenditure on

(1) _____ while expenditure on nondurable goods is

more like expenditure on (2) _____ Investment tends to

have (3) _____ variability relative to GDP which is

demonstrated by a (4) _____ Consumption tends to have

(5) _____ variability relative to GDP which is

demonstrated by a (6) _____

	Correlation Coefficient (GDP)	Std. (% of S.D
Consumption	0.78	83
Investment	0.81	5(
Employment	0.79	8
Average labour productivity	0.65	6

	Cyclicality	Lead/Lag	Va Relat
Consumption	Procyclical	Coincident	S
Investment	Procyclical	Coincident	I
Employment	Procyclical	Lagging	S
Real wage rate	Procyclical	?	
Average labour productivity	Procyclical	Coincident	S

31: Definition

business cycle: Fluctuations about trend in real GDP

(1) ○ investment, ○ consumption,

(2) ○ investment. ○ consumption.

(3) ○ larger ○ smaller

(4) ○ larger standard deviation. ○ larger correlation coefficient. ○ smaller standard deviation. ○ smaller correlation coefficient.

(5) ○ larger ○ smaller

(6) ○ smaller standard deviation. ○ larger standard deviation. ○ smaller correlation coefficient. ○ larger correlation coefficient.

22. What goods do consumers consume in the macroeconomic model? *(Select all that apply.)*

- [ ] **A.** Leisure
- [ ] **B.** Consumption goods
- [ ] **C.** Public goods
- [ ] **D.** Utilities
- [ ] **E.** Intangibles

---

23. How are a consumer's preferences over goods represented?

- ○ **A.** Consumer's budget constraint equation
- ○ **B.** Consumption bundles
- ○ **C.** Supply and demand curves
- ○ **D.** Indifference curves

---

24. What three properties do the preferences of the representative consumer[32] have and why are they important? *(Select all that apply.)*

- [ ] **A.** The consumer prefers inferior goods. In Canada the consumer prefers to buy inferior goods that are cheaper, even if he or she sees an increase in their own income.
- [ ] **B.** Consumption and leisure are normal goods. The representative consumer will purchase more consumption goods and increase his or her leisure time when income increases.
- [ ] **C.** More is always preferred to less. The consumer in Canada today consumes far more than the average consumer 200 years ago and would consume more if feasible.
- [ ] **D.** Less is always preferred to more. The representative consumer only buys goods that are needed and prefers only the necessary amount of goods and no more.
- [ ] **E.** The consumer does not act competitively. Consumers today do not value the incomes of others and do things that are only in their best interest.
- [ ] **F.** The consumer likes diversity in his or her consumption bundle. If the consumer is indifferent between consumption bundles, then some mixture of bundles will be preferred over just one.

32: Definition

representative consumer: A stand-in for all consumers in the economy

---

25. What is the representative consumer's[33] goal?

- **A.** The goal is to maximize consumption, with little to no room for leisure. The consumer wants to only do things that make him or her happy.
- **B.** The goal is to choose consumption and leisure. The consumer wants to makes himself or herself as well off as possible while respecting his or her budget constraint.
- **C.** The goal is to only maximize leisure and not consumption. The consumer does not want to respect his or her own budget constraint.
- **D.** The goal is to maximize the preference that less is always preferred to more. The consumer wants to maximize his or her budget constraint.

33: Definition

representative consumer: A stand-in for all consumers in the economy

26. When the consumer chooses his or her optimal consumption bundle[34] while respecting his or her budget constraint[35], what condition is satisfied?

- **A.** Marginal condition
- **B.** Budget condition
- **C.** Barter condition
- **D.** Income condition

34: Definition

optimal consumption bundle: A given consumption-leisure combination

35: Definition

budget constraint: Condition that consumption equals wage income plus nonwage income minus taxes

27. How is the representative consumer's[36] behaviour affected by an increase in real dividend income[37]?

- **A.** The consumer will consume less goods and less leisure.
- **B.** The consumer will consume more goods and more leisure.
- **C.** The consumer will consume more goods and less leisure.
- **D.** The consumer will consume less goods and more leisure.

36: Definition

representative consumer: A stand-in for all consumers in the economy

37: Definition

dividend income: Profits of firms that are distributed to the consumer, who owns the firms

---

28. How is the representative consumer's[38] behaviour affected by an increase in real taxes?

- **A.** The consumer will consume more goods and more leisure.
- **B.** The consumer will consume less goods and more leisure.
- **C.** The consumer will consume more goods and less leisure.
- **D.** The consumer will consume less goods and less leisure.

38: Definition

representative consumer: A stand-in for all consumers in the economy

---

29. Why might hours worked by the representative consumer[39] decrease when the real wage[40] increases?

- **A.** An increase in the real wage causes consumption to increase, and therefore, the consumer will spend less time working and more time consuming goods.
- **B.** The substitution effect might dominate the income effect. With the substitution effect, leisure can be counted as a substitute good.
- **C.** The income effect might dominate the substitution effect. With the income effect, the consumer will want to consume more leisure as it is now a normal good.
- **D.** The consumer will cut out consumer goods and spend all his or her extra wages on leisure.

39: Definition

representative consumer: A stand-in for all consumers in the economy

40: Definition

real wage: The wage rate in units of the consumption good

30. What is the representative firm's[41] goal?

- **A.** The firm's goal is to maximize its profits by choosing the quantity of labour to hire, with the quantity of capital being fixed.
- **B.** The firm's goal is to maximize its profits by choosing the quality of labour to hire, with the quantity of capital being fixed.
- **C.** The firm's goal is to maximize its profits by choosing the quality of capital, with the quantity of labour being fixed.
- **D.** The firm's goal is to maximize its profits by choosing the quantity of capital, with the quantity of labour being fixed.

41: Definition

representative firm: A stand-in for all firms in the economy

31. Why is the marginal product[42] of labour diminishing?

- ○ **A.** It has decreasing returns to scale, showing that large firms are more efficient than small firms.
- ○ **B.** The slope of the production function is always negative, and the two are directly correlated.
- ○ **C.** The cost advantage increases for each additional unit of input taken away.
- ○ **D.** The cost advantage diminishes for each additional unit of labour produced.

42: Definition

marginal product: The additional output produced when another unit of a factor of production is added to the production process

32. What are the effects of an increase in total factor productivity[43] on the production function[44]? *(Select all that apply.)*

- ☐ **A.** The marginal product of labour decreases.
- ☐ **B.** The marginal product of labour increases.
- ☐ **C.** The production function shifts downward.
- ☐ **D.** The production function shifts upward.

43: Definition

total factor productivity: A variable in the production function that makes all factors of production more productive if it increases

44: Definition

production function: A function describing the technological possibilities for converting factor inputs into output

33. Explain why the marginal product[45] of labour curve is the firm's labour demand curve.

- **A.** A firm maximizes profits for the quality of labour input that implies marginal product of labour equals wages.
- **B.** A firm maximizes profits for the quantity of labour input that implies marginal product of labour equals wages.
- **C.** A firm maximizes profits for the quantity of labour input that implies marginal product of labour is less than wages.
- **D.** A firm maximizes profits for the quantity of labour input that implies marginal product of labour is greater than wages.

45: Definition

marginal product: The additional output produced when another unit of a factor of production is added to the production process

1. A. It is particularly focused on long-run growth and business cycles., B.
   It deals with the overall effects on economies of the choices that all economic agents make., D.
   It is the study of the behaviour of large collections of economic agents.

---

2. C. The approximate growth rate of the time series (when the growth rate is small)

---

3. (1) a smooth fit to the data,

   (2) the deviation from a smooth fit to the data.

---

4. C.
   Simple models are most useful because the purpose of an economic model is to capture the essential features needed for analyzing a particular economic problem.

---

5. A. The technology available to firms for producing goods, C. The consumers and firms that interact in the economy, D.
   The set of goods that consumers want to consume, F. Consumers' preferences over goods, G. The resources available

---

6. C. Nominal rate = Real rate + Inflation.

   (1) better off

---

7. 100,000

   20,000

   70,000

   190,000

---

8. D. Value added is the value of goods produced, minus the value of intermediate goods used in production.

---

9. 67511

17.41

---

10. 110

25

145

125

– 25

– 30

20

---

11. 943.00

943.00

1,245.50

1,140.50

---

12. (1) they fluctuate about trend

(2) real gross domestic product.

---

13. A. There is no regularity in the amplitude of fluctuations in real GDP about trend., D.
The time series of deviations from trend in real GDP is quite choppy., E.
There is no regularity in the frequency of fluctuations in real GDP about trend.

---

14. (1) investment,

    (2) consumption.

    (3) larger

    (4) larger standard deviation.

    (5) smaller

    (6) smaller standard deviation.

---

15. D.
    Two time series are positively correlated when one series is high (low) and the other series is high (low). Two time series that are negatively correlated show one series high (low) when the other series is low (high).

    A.
    The correlation is determined by the slope of a straight line that best fits the points in the scatter plot. A positive correlation will contain a positive sloped line, and a negative correlation will contain a negative sloped line.

---

16. B. The index can provide useful information on the turning points in aggregate economic activity.

---

17. B. If a trend is more or less variable relative to real GDP, D. Whether a variable is leading or lagging, E.
    Whether a variable is procyclical or countercyclical

---

18. D.
    Both consumption and investment expenditures are procyclical. In contrast to consumption, investment is much more volatile than is GDP.

---

19. D.
    In the labour market, employment is procyclical, lagging, and less variable than real GDP. Real wage is procyclical, and average labour productivity is procyclical, coincident, and less variable than real GDP.

---

20. (1) procyclical.

(2) both increase (decrease).

(3) procyclical

(4) increase (decrease) proportionally more than N during a boom (recession).

---

21. (1) investment,

(2) consumption.

(3) larger

(4) larger standard deviation.

(5) smaller

(6) smaller standard deviation.

---

22. A. Leisure, B. Consumption goods

---

23. D. Indifference curves

---

24. B.
Consumption and leisure are normal goods. The representative consumer will purchase more consumption goods and increase his or her leisure time when income increases.
, C.
More is always preferred to less. The consumer in Canada today consumes far more than the average consumer 200 years ago and would consume more if feasible.
, F.
The consumer likes diversity in his or her consumption bundle. If the consumer is indifferent between consumption bundles, then some mixture of bundles will be preferred over just one.

---

25. B.
The goal is to choose consumption and leisure. The consumer wants to makes himself or herself as well off as possible while respecting his or her budget constraint.

---

26. A. Marginal condition

---

27. B. The consumer will consume more goods and more leisure.

---

28. D. The consumer will consume less goods and less leisure.

---

29. C.
The income effect might dominate the substitution effect. With the income effect, the consumer will want to consume more leisure as it is now a normal good.

---

30. A. The firm's goal is to maximize its profits by choosing the quantity of labour to hire, with the quantity of capital being fixed.

---

31. D. The cost advantage diminishes for each additional unit of labour produced.

---

32. B. The marginal product of labour increases., D. The production function shifts upward.

---

33. B. A firm maximizes profits for the quantity of labour input that implies marginal product of labour equals wages.
