



Chapter-04 - teatbank

Intermediate Macroeconomic Theory and Policy I (The University of Western Ontario)

Macroeconomics, 5e (Williamson)

Chapter 4 Consumer and Firm Behavior: The Work-Leisure Decision and Profit Maximization

- 1) A dynamic decision is one that
- A) is made very quickly.
 - B) involves only the present.
 - C) involves only the future.
 - D) involves planning over more than one time period.

Answer: D

Question Status: Previous Edition

- 2) A static decision is one that
- A) is made very slowly.
 - B) involves planning over one time period.
 - C) involves planning over exactly two time periods.
 - D) involves planning over more than one time period.

Answer: B

Question Status: Previous Edition

- 3) We typically assume that
- A) both consumption and leisure are normal goods.
 - B) consumption is a normal good and leisure is an inferior good.
 - C) consumption is an inferior good and leisure is a normal good.
 - D) both consumption and leisure are inferior goods.

Answer: A

Question Status: Previous Edition

- 4) The principle that consumers and firms optimize
- A) is not helpful because some economic agents may behave irrationally.
 - B) is helpful because it allows us to analyze how economic agents respond to changes in their environment.
 - C) only applies to perfectly competitive markets.
 - D) is helpful because it determines the available technology.

Answer: B

Question Status: Previous Edition

- 5) The consumer's work-leisure choice problem focuses on how a consumer's work-leisure decision is affected by the consumer's
- A) preferences and productivity.
 - B) productivity and psychology.
 - C) psychology and preferences.
 - D) preferences and constraints.

Answer: D

Question Status: Previous Edition

6) Leisure includes all of the following **except**

- A) sleep.
- B) home yardwork.
- C) market work.
- D) recreational activities.

Answer: C

Question Status: Previous Edition

7) The consumer wants to work because he/she

- A) is told to work.
- B) likes to work.
- C) likes leisure.
- D) wants the income.

Answer: D

Question Status: New

8) In macroeconomic analysis, the representative consumer

- A) denotes the consumer with the average amount of income.
- B) plays the role of a stand-in for all consumers in the economy.
- C) is the consumer who bargains with firms for all workers in the economy.
- D) is always a misleading fiction.

Answer: B

Question Status: Previous Edition

9) We are assuming that

- A) all consumers are different.
- B) there are many identical consumers.
- C) there is a single consumer.
- D) only one consumer matters.

Answer: B

Question Status: New

10) A utility function

- A) is a stand-in for a more complicated function.
- B) is useful only in microeconomics, not macroeconomics.
- C) captures the preferences of the representative household over consumption and leisure.
- D) captures the representative firm's ability to produce goods and services.

Answer: C

Question Status: Previous Edition

11) We consider the preferences of the consumer because

- A) we want to understand the consumer's reaction to changing circumstances.
- B) we want to determine the best marketing strategy.
- C) the government wants to make the best consumption and leisure choice.
- D) the firm needs to determine what to produce.

Answer: A

Question Status: New

12) We use the concept of a representative agent because

- A) we live in a democracy.
- B) there is no taxation without representation.
- C) distribution does not matter for our purposes.
- D) there is not that much variation across agents anyway.

Answer: C

Question Status: Previous Edition

13) A consumption bundle

- A) is a particular combination of consumption and leisure.
- B) only measures a quantity of goods and services, but not the amount of leisure.
- C) is a method of bringing home consumption goods.
- D) measures the quality of a particular good.

Answer: A

Question Status: Previous Edition

14) A utility function

- A) needs to measure the absolute level of happiness.
- B) needs to measure relative amounts of happiness for a single individual.
- C) helps compare the relative happiness of two separate consumers.
- D) is most useful if it can be influenced by others.

Answer: B

Question Status: Previous Edition

15) We use indifference curves because

- A) households on average do not care.
- B) they help represent preferences.
- C) households sometimes make mistakes.
- D) they formalize the production process.

Answer: B

Question Status: Previous Edition

16) The preferences of the representative consumer over consumption and leisure are represented by use of a

- A) production function.
- B) utility function.
- C) benefit function.
- D) preference function.

Answer: B

Question Status: Previous Edition

- 17) We assume that the representative consumer's preferences exhibit the properties that
- A) they evolve over time and that more is always preferred to less.
 - B) more is preferred to less and that the consumer prefers diversity.
 - C) the consumer likes diversity and that more is sometimes preferred to less.
 - D) more is sometimes preferred to less and that consumption and leisure are both normal goods.

Answer: B

Question Status: Previous Edition

- 18) What did we assume about household preferences?

- A) Households prefer more to less.
- B) Households like money.
- C) Households dislike taxes.
- D) Households care about others.

Answer: A

Question Status: Previous Edition

- 19) A consumer is said to be indifferent between two consumption bundles

- A) when the consumer doesn't care about his or her consumption bundle.
- B) when the two bundles provide equal amounts of utility.
- C) when the consumer chooses the bundles equally often.
- D) when the consumer is indecisive.

Answer: B

Question Status: Previous Edition

- 20) We assume that the representative consumer's preferences exhibit the properties that

- A) they are convex and that more is always preferred to less.
- B) more is always preferred to less and that each consumer has one strictly favorite good.
- C) each consumer has one strictly preferred good and that consumption and leisure are both normal goods.
- D) consumption and leisure are both normal goods and that the consumer likes diversity in his or her consumption bundle.

Answer: D

Question Status: Previous Edition

- 21) In the (consumption, leisure) space, indifference curves as we have assumed them are

- A) downward sloping and bowed out of the origin.
- B) downward sloping and bowed towards the origin.
- C) upward sloping and bowed out of the origin.
- D) upward sloping and bowed towards the origin.

Answer: B

Question Status: Previous Edition

22) In the (consumption, leisure) space, indifference curves as we have assumed them have the property of presenting the highest levels of satisfaction

- A) in the north-east corner.
- B) in the south-east corner.
- C) in the north-west corner.
- D) in the south-west corner.

Answer: A

Question Status: Previous Edition

23) A good is normal for a consumer if

- A) it is always consumed in a consistent quantity.
- B) its consumption rises when income rises.
- C) its consumption falls when income rises.
- D) some minimal level of the good must be consumed to assure the consumer's survival.

Answer: B

Question Status: Previous Edition

24) We assume leisure is a normal good. This implies that

- A) an increase in taxes decreases the demand for leisure.
- B) households maximize utility.
- C) preferences over consumption are well defined.
- D) an increase in the wage increases demand for leisure.

Answer: A

Question Status: Previous Edition

25) A good is inferior for a consumer if

- A) it is never included in his or her consumption bundle.
- B) its consumption rises when income rises.
- C) its consumption falls when income rises.
- D) some minimal level of the good must be consumed to assure the consumer's survival.

Answer: C

Question Status: Previous Edition

26) A consumption bundle

- A) is a particular combination of consumption and leisure.
- B) only measures a quantity of goods and services, but not the amount of leisure.
- C) is a method of bringing home consumption goods.
- D) measures the quality of a particular good.

Answer: A

Question Status: Previous Edition

27) An indifference curve

- A) connects a set of consumption bundles among which the consumer is indifferent.
- B) is only useful in analyzing apathetic consumers.
- C) connects a set of consumers who each have the same preferences.
- D) is only useful in microeconomics.

Answer: A

Question Status: Previous Edition

28) Two key properties of indifference curves are that an indifference curve slopes

- A) upward and is bowed out from the origin.
- B) downward and is bowed out from the origin.
- C) upward and is bowed in toward the origin.
- D) downward and is bowed in toward the origin.

Answer: D

Question Status: Previous Edition

29) The fact that indifference curves are downward sloping

- A) is not true.
- B) follows from the fact that more is preferred to less.
- C) follows from the property that the consumer likes diversity in his or her consumption bundle.
- D) follows from the property that consumption and leisure are normal goods.

Answer: B

Question Status: Previous Edition

30) The fact that indifference curves are bowed in toward the origin

- A) is not true.
- B) follows from the fact that more is preferred to less.
- C) follows from the property that the consumer likes diversity in his or her consumption bundle.
- D) follows from the property that consumption and leisure are normal goods.

Answer: C

Question Status: Previous Edition

31) The marginal rate of substitution

- A) can be computed by measuring the slope of the indifference curve.
- B) can be computed by measuring the curvature of the indifference curve.
- C) cannot be deduced from the properties of the indifference curve.
- D) can only be computed if we know the prices of all goods.

Answer: A

Question Status: Previous Edition

32) The property of diminishing marginal rate of substitution follows from the property that the indifference curve is

- A) downward sloping.
- B) upward sloping.
- C) bowed in toward the origin.
- D) bowed out from the origin.

Answer: C

Question Status: Previous Edition

33) The marginal rate of substitution measures

- A) the willingness of a consumer to exchange a good with another consumer.
- B) the willingness of a consumer to pay the form for a good.
- C) the value in dollars of the last unit of good obtained by the consumer.
- D) the rate at which a consumer is willing to exchange one good for another.

Answer: D

Question Status: New

34) The representative consumer acts competitively

- A) when he or she can haggle for a lower price.
- B) when he or she is a price-taker.
- C) when he or she is a price-maker.
- D) if the consumer is large relative to the size of the market.

Answer: B

Question Status: Previous Edition

35) When consumers act as price-takers, we say that they behave

- A) cooperatively.
- B) competitively.
- C) monopsonistically.
- D) irrationally.

Answer: B

Question Status: Previous Edition

36) A barter economy

- A) cannot be a market economy.
- B) is an economy without monetary exchange.
- C) is an economy with no business firms.
- D) is not a competitive economy.

Answer: B

Question Status: Previous Edition

37) An economy without monetary exchange is called

- A) a primitive economy.
- B) a barter economy.
- C) a socialist economy.
- D) an autarky economy.

Answer: B

Question Status: Previous Edition

38) A numeraire is

- A) an average good.
- B) a tax levied on each consumer.
- C) a good used as a unit of account.
- D) an optimal bundle of goods.

Answer: C

Question Status: New

39) The time constraint for the consumer is

- A) the amount of time for decision making.
- B) expressed as $\text{leisure time} - \text{time spent working} = \text{total time available}$.
- C) expressed as $\text{leisure time} - \text{sleep time} = \text{time spent working}$.
- D) expressed as $\text{leisure time} + \text{time spent working} = \text{total time available}$.

Answer: D

Question Status: Previous Edition

40) The real wage denotes

- A) the number of units of consumption goods that can be exchanged for one unit of labor time.
- B) the number of units of labor time that can be exchanged for one unit of consumption goods.
- C) the number of units of labor time that can be exchanged for one unit of leisure time.
- D) the number of units of leisure time that can be exchanged for one unit of labor time.

Answer: A

Question Status: Previous Edition

41) A lump-sum tax is a tax that

- A) can be avoided by strategic behavior.
- B) does not depend on the actions of the economic agent being taxed.
- C) does not depend on the actions of the government.
- D) distorts economic decisions.

Answer: B

Question Status: Previous Edition

42) In a one-period economy

- A) consumption equals disposable income.
- B) consumption equals disposable income plus the value of non-market work.
- C) savings is always positive.
- D) consumers may increase their consumption by borrowing.

Answer: A

Question Status: Previous Edition

43) A consumer's real disposable income equals

- A) wage income plus consumption expenditures.
- B) wage income plus profit income minus taxes.
- C) total income minus profit income minus taxes.
- D) total income minus wage income minus taxes.

Answer: B

Question Status: Previous Edition

44) In a one-period economy, real consumption

- A) is always less than disposable income.
- B) is typically greater than disposable income.
- C) is exactly equal to disposable income.
- D) can be greater than, less than, or equal to disposable income.

Answer: C

Question Status: Previous Edition

45) In a one-period economy, all of the following are equivalent expressions of the budget constraint **except**

- A) $C = w(N^S + l) + \pi - T$.
- B) $C = wN^S + \pi - T$.
- C) $C = w(h - l) + \pi - T$.
- D) $C = wl = wh + \pi - T$.

Answer: A

Question Status: Previous Edition

46) With consumption on the vertical axis and leisure on the horizontal axis, the slope of the budget line is equal to

- A) w .
- B) $-w$.
- C) π .
- D) $-\pi$.

Answer: B

Question Status: Previous Edition

47) The vertical intercept of the consumer's budget line is equal to

A) $h + \frac{(\pi - T)}{w}$.

B) $wh + \pi - T$.

C) $c + w(l - h)$.

D) $\pi - T$.

Answer: B

Question Status: Previous Edition

48) An increase in taxes has the following impact on the budget constraint

A) a parallel move down.

B) a parallel move up.

C) a tilting to the left.

D) a tilting to the right.

Answer: A

Question Status: Previous Edition

49) The household budget constraint may have a kink because

A) there is uncertainty.

B) households prefer diversity.

C) households may substitute consumption for leisure, or the reverse.

D) leisure is limited by the number of available hours.

Answer: D

Question Status: Previous Edition

50) The optimal consumption bundle is the point representing a consumption-leisure pair that is on the

A) lowest possible indifference curve and is on or outside the consumer's budget constraint.

B) lowest possible indifference curve and is on or inside the consumer's budget constraint.

C) highest possible indifference curve and is on or outside the consumer's budget constraint.

D) highest possible indifference curve and is on or inside the consumer's budget constraint.

Answer: D

Question Status: Previous Edition

51) At the optimal consumption bundle, the marginal rate of substitution of leisure for consumption is equal to

A) the real wage and the budget line is tangent to an indifference curve.

B) minus the real wage and the budget line is tangent to the indifference curve.

C) the real wage and the budget line intersects the indifference curve.

D) minus the real wage and the budget line intersects the indifference curve.

Answer: A

Question Status: Previous Edition

- 52) Saying the consumer is rational means
- A) the consumer is a stand-in for all consumers.
 - B) the consumer is getting rationed.
 - C) the consumer makes reasonable choices.
 - D) the consumer makes the best choices.

Answer: D

Question Status: New

- 53) A defense for the assumption that consumers maximize is that
- A) consumers never make mistakes.
 - B) mistakes by the consumer are not likely to last for a long time.
 - C) it allows for many possible outcomes.
 - D) mistaken consumers may receive counseling from the government.

Answer: B

Question Status: Previous Edition

- 54) An increase in real dividend income minus taxes represents
- A) a pure substitution effect.
 - B) a pure income effect.
 - C) a combination of income and substitution effects.
 - D) neither a pure income effect nor a pure substitution effect.

Answer: B

Question Status: Previous Edition

- 55) A positive, pure income effect can be obtained by
- A) increasing the real wage.
 - B) increasing the tax.
 - C) increasing the dividend
 - D) decreasing leisure.

Answer: C

Question Status: New

- 56) A pure positive income shock leads to
- A) an increase in leisure and consumption.
 - B) an increase in leisure and work.
 - C) an increase in work and consumption.
 - D) an increase in leisure and taxes.

Answer: A

Question Status: Previous Edition

57) When consumption and leisure are both normal goods, after an increase in real dividend income minus taxation, the rational consumer

- A) increases consumption and increases leisure.
- B) increases consumption and reduces leisure.
- C) reduces consumption and increases leisure.
- D) reduces consumption and reduces leisure.

Answer: A

Question Status: Previous Edition

58) When consumption and leisure are both normal goods, after an increase in real dividend income minus taxation, the rational consumer

- A) increases consumption and increases labor supply.
- B) increases consumption and reduces labor supply.
- C) reduces consumption and increases labor supply.
- D) reduces consumption and reduces labor supply.

Answer: B

Question Status: Previous Edition

59) An increase in the real wage

- A) represents a pure substitution effect.
- B) represents a pure income effect.
- C) represents a combination of income and substitution effects.
- D) causes a parallel shift in the consumer's budget line.

Answer: C

Question Status: Previous Edition

60) An increase in the real wage

- A) unambiguously increases consumption and increases labor supply.
- B) increases consumption and has an ambiguous effect on labor supply.
- C) has an ambiguous effect on consumption and increases labor supply.
- D) has an ambiguous effect on both consumption and labor supply.

Answer: B

Question Status: Previous Edition

61) When the wage increases, the substitution effect in the household's choices leads to

- A) a decrease in consumption and leisure.
- B) a decrease in consumption and an increase in leisure.
- C) an increase in consumption and a decrease in leisure.
- D) an increase in consumption and leisure.

Answer: C

Question Status: Previous Edition

- 62) When the wage increases, the income effect on the household's choices leads to
- A) a decrease in consumption and leisure.
 - B) a decrease in consumption and an increase in leisure.
 - C) an increase in consumption and a decrease in leisure.
 - D) an increase in consumption and leisure.

Answer: D

Question Status: Previous Edition

- 63) Theoretically, an increase in the real wage
- A) increases leisure.
 - B) decreases leisure.
 - C) has an ambiguous effect on leisure.
 - D) has no effect on leisure.

Answer: C

Question Status: New

- 64) In the United States during the period 1980-2009, there was
- A) an upward trend in both the real wage and average hours worked.
 - B) an upward trend in real wages, and a downward trend in average hours worked.
 - C) a downward trend in real wages, and an upward trend in average hours worked.
 - D) a downward in both real wages and average hours worked.

Answer: B

Question Status: Revised

- 65) The substitution effect measures
- A) the responses of quantities to changes in the relative prices of goods.
 - B) the responses of relative prices to changes in the demand for goods.
 - C) how two goods can be used for the same purpose.
 - D) the responses of quantities to changes in the relative qualities of goods.

Answer: A

Question Status: Previous Edition

- 66) The labor supply is increasing in the wage because
- A) the substitution effect is larger than the income effect.
 - B) the income effect is larger than the substitution effect.
 - C) the production function is increasing in labor.
 - D) the marginal product of labor is decreasing.

Answer: A

Question Status: Previous Edition

- 67) A production function describes the
- A) technological possibilities for converting factor inputs into outputs.
 - B) intellectual possibilities for converting factor inputs into outputs.
 - C) amount of resources available to the representative firm.
 - D) actual process of converting factor inputs into outputs.

Answer: A

Question Status: Previous Edition

68) In the production function, $Y = zF(K, N^d)$, total factor productivity is

A) Y/K .

B) Y/N^d .

C) F/Y .

D) z .

Answer: D

Question Status: Previous Edition

69) Capital, K , encompasses

A) money.

B) machinery.

C) business loans.

D) know-how.

Answer: B

Question Status: Revised

70) The marginal product of a factor of production

A) is equal to the ratio of the amount of that factor of production to the amount of output produced.

B) is equal to the amount of additional output that can be produced with one additional unit of each factor input.

C) is equal to the amount of additional output that can be produced with one additional unit of that factor input, holding constant the quantities of the other factor inputs.

D) always exceeds the average product of that factor input, holding constant the quantities of the other factor inputs.

Answer: C

Question Status: Previous Edition

71) Constant returns to scale means that, given any constant $x > 0$

A) $xY = zF(xK, xN^d)$.

B) $xY > zF(xK, xN^d)$.

C) $xY < zF(xK, xN^d)$.

D) $xY = Z^x F(K, N^d)$.

Answer: A

Question Status: Previous Edition

72) The construct of a representative firm is most helpful in describing the behavior of all of the firms in the economy when

A) there are constant returns to scale.

B) there are increasing returns to scale.

C) there are decreasing returns to scale.

D) the marginal product of labor is increasing in the amount of labor input.

Answer: A

Question Status: Previous Edition

73) We are assuming that the returns to scale are

- A) scalable.
- B) constant.
- C) increasing.
- D) zero.

Answer: B

Question Status: New

74) As the quantity of labor increases, the marginal product of labor

- A) is constant.
- B) increases.
- C) decreases.
- D) may either increase or decrease.

Answer: C

Question Status: Previous Edition

75) As the quantity of labor increases, the marginal product of capital

- A) is constant.
- B) increases.
- C) decreases.
- D) may either increase or decrease.

Answer: B

Question Status: New

76) As the quantity of capital increases, the marginal product of capital

- A) is constant.
- B) increases.
- C) decreases.
- D) may either increase or decrease.

Answer: C

Question Status: Previous Edition

77) As the quantity of capital increases, the marginal product of labor

- A) is constant.
- B) increases.
- C) decreases.
- D) may either increase or decrease.

Answer: B

Question Status: Previous Edition

78) The assumption that labor has a decreasing marginal return to production means that as labor increases

- A) output increases.
- B) the wage increases.
- C) the production function is concave.
- D) the production function shifts upward.

Answer: C

Question Status: Previous Edition

79) If the quantity of labor and capital both increase in the same proportion, the marginal product of labor

- A) is constant.
- B) increases.
- C) decreases.
- D) may either increase or decrease.

Answer: A

Question Status: New

80) The production function is concave in labor because

- A) the contribution to production of each additional unit of labor decreases.
- B) the marginal product of labor is increasing.
- C) the marginal product of capital is decreasing.
- D) the labor demand is downward sloping.

Answer: A

Question Status: Previous Edition

81) The production function is concave in capital because

- A) the contribution to production of each additional unit of capital decreases.
- B) the marginal product of capital is increasing.
- C) the marginal product of labor is decreasing.
- D) the cost of loans increases with their quantity.

Answer: A

Question Status: New

82) An increase in total factor productivity shifts the production function

- A) upward and increases the marginal product of labor.
- B) upward and decreases the marginal product of labor.
- C) downward and increases the marginal product of labor.
- D) downward and decreases the marginal product of labor.

Answer: A

Question Status: Previous Edition

83) Of the following, which is the least likely example of an increase in total factor productivity?

- A) the introduction of the assembly line
- B) the invention of the personal computer
- C) good weather
- D) a reduction in the relative price of energy

Answer: B

Question Status: Previous Edition

84) An increase in total factor productivity could be the result of

- A) adverse weather.
- B) the addition of new machinery.
- C) new hires.
- D) the introduction of new manufacturing methods.

Answer: D

Question Status: New

85) Look at the production schedule of the Widget Company below:

| | | | | | | |
|-------------------|---|----|----|----|----|----|
| Number of workers | 0 | 1 | 2 | 3 | 4 | 5 |
| Number of widgets | 0 | 12 | 22 | 30 | 36 | 40 |

What is the marginal product of the second worker?

- A) 8
- B) 10
- C) 12
- D) 22

Answer: B

Question Status: Previous Edition

86) Look at the production schedule of the Widget Company below:

| | | | | | | |
|-------------------|---|----|----|----|----|----|
| Number of workers | 0 | 1 | 2 | 3 | 4 | 5 |
| Number of widgets | 0 | 12 | 22 | 30 | 36 | 40 |

If the real wage is 7, how many workers should Widget Company hire?

- A) none
- B) 2
- C) 3
- D) 4

Answer: C

Question Status: Previous Edition

87) Look at the production schedule below:

| | | | | | | |
|---------|---|----|----|-----|-----|-----|
| Workers | 0 | 1 | 2 | 3 | 4 | 5 |
| Output | 0 | 45 | 80 | 100 | 130 | 165 |

Which property of a standard production function does it violate?

- A) constant returns to scale
- B) decreasing marginal product of capital
- C) decreasing marginal product of labor
- D) production increasing in labor

Answer: C

Question Status: Previous Edition

88) Look at the production schedule below:

| | | | | | | |
|---------|---|----|----|-----|-----|-----|
| Workers | 0 | 1 | 2 | 3 | 4 | 5 |
| Output | 0 | 45 | 80 | 100 | 130 | 165 |

Which worker violates a property of the standard production function?

- A) 1
- B) 2
- C) 3
- D) 4

Answer: D

Question Status: Previous Edition

89) Which is a good example of an increase in total factor productivity?

- A) a tax cut
- B) good weather
- C) a company reducing its workforce
- D) better credit conditions

Answer: B

Question Status: Previous Edition

90) Total factor productivity encompasses

- A) labor.
- B) capital.
- C) output.
- D) know-how.

Answer: D

Question Status: Previous Edition

- 91) An increase in total factor productivity
A) changes neither the slope nor the position of the production function.
B) changes the slope but not the position of the production function.
C) changes the position but not the slope of the production function.
D) changes both the slope and the position of the production function.

Answer: D

Question Status: Previous Edition

- 92) The Solow residual is a measure of
A) average labor productivity.
B) average capital productivity.
C) total factor productivity.
D) the rate of growth of real GDP.

Answer: C

Question Status: Previous Edition

- 93) A Cobb-Douglas production function is
A) a production function for the textile industry.
B) a particular functional form.
C) a production function applicable in the service industry.
D) the production function that Henry Ford applied in his firm.

Answer: B

Question Status: New

- 94) The profit-maximizing quantity of labor equates the marginal product of labor with
A) total factor productivity.
B) the marginal product of capital.
C) the real wage.
D) the average product of labor.

Answer: C

Question Status: Previous Edition

- 95) When the representative firm maximizes profits,
A) it sells as much as possible.
B) the wage equals average labor productivity.
C) the wage equals marginal labor productivity.
D) business taxes must be zero.

Answer: C

Question Status: Previous Edition

- 96) When the representative firm maximizes profits
A) production is at its maximum.
B) the slope of the production function is at its flattest.
C) labor costs are minimized.
D) the marginal product of labor equals the wage.

Answer: D

Question Status: Previous Edition

97) Suppose the representative firm suddenly has less capital at its disposal. What happens to labor demand?

- A) It increases.
- B) It stays the same.
- C) It decreases.
- D) We cannot tell.

Answer: C

Question Status: Previous Edition

The questions below deal with the Widget Company, which produces widgets according to the following table.

| Number of Widget Workers | Number of Widgets Produced |
|--------------------------|----------------------------|
| 0 | 0 |
| 1 | 12 |
| 2 | 22 |
| 3 | 30 |
| 4 | 36 |
| 5 | 40 |

98) The marginal product of the second widget worker hired is

- A) 2.
- B) 8.
- C) 10.
- D) 12.

Answer: C

Question Status: Previous Edition

99) If the real wage is equal to 7 widgets, and only an integer number of workers can be hired, the Widget company should hire

- A) 2 workers.
- B) 3 workers.
- C) 4 workers.
- D) 5 workers.

Answer: B

Question Status: Previous Edition

The questions below deal with the Gizmo Company, which has the following production function.

| Number of Workers | Number of Gizmos Produced |
|-------------------|---------------------------|
| 0 | 0 |
| 1 | 10 |
| 2 | 19 |
| 3 | 26 |
| 4 | 31 |
| 5 | 34 |

100) The marginal product of the fourth gizmo worker hired is

- A) 1.
- B) 3.
- C) 5.
- D) 10.

Answer: C

Question Status: Previous Edition

101) If the real wage is equal to 8 widgets, and only an integer number of workers can be hired, the Gizmo company should hire

- A) 2 workers.
- B) 3 workers.
- C) 4 workers.
- D) 5 workers.

Answer: A

Question Status: Previous Edition

102) Labor demand is decreasing in the wage because

- A) the substitution effect is larger than the income effect.
- B) the income effect is larger than the substitution effect.
- C) the production function is concave.
- D) the marginal product of labor is increasing in labor.

Answer: C

Question Status: Previous Edition