

CHAPTER 2 MULTIPLE CHOICE QUESTIONS

Questions 2-1 to 2-10. Production Function.

Below is the production function for an agribusiness firm, where X is the input, and Y is the output.

<u>X</u>	<u>Y</u>	<u>APP</u>	<u>MPP</u>
0	—	--	--
1	10	—	10
2	—	15	—
3	45	—	15
4	50	—	—
5	45	—	—
6	—	6	-9

2-1. What is the TPP of using 0 units of input?

- A. 1
- B. 0
- C. 10
- D. -10

2-2. What is the APP of using 1 unit of input?

- A. 0
- B. 10
- C. -10
- D. 1

2-3. What is the TPP of using 2 units of input?

- A. 20
- B. -10
- C. 30
- D. 10

2-4. What is the MPP of using 2 units of input?

- A. 30
- B. 10
- C. 20
- D. -10

2-5. What is the APP of using 3 units of input?

- A. 10
- B. 15
- C. 20
- D. -10

2-6. What is the APP of using 4 units of input?

- A. 10
- B. 12.5
- C. 15
- D. -10

2-7. What is the MPP of using 4 units of input?

- A. 5
- B. 0
- C. 10
- D. -10

2-8. What is the APP of using 5 units of input?

- A. 5
- B. 9
- C. 10
- D. -10

2-9. What is the MPP of using 5 units of input?

- A. 5
- B. 10
- C. -10
- D. -5

2-10. What is the TPP of using 6 units of input?

- A. 36
- B. 24
- C. 9
- D. -9

2-11. At the point where $APP = MPP$:

- A. is the border between Stage II and Stage III of production
- B. APP is decreasing
- C. MPP is decreasing
- D. MPP is constant

2-12. Technological change in agricultural production:

- A. shifts the production function upwards
- B. provides less output for the same amount of input
- C. does not affect the production function
- D. decreases the net output of the production process

2-13. The Law of Diminishing Marginal Returns states that:

- A. scarcity forces us to choose
- B. if more input is used in a firm, holding all other inputs constant, the additional product will eventually decline

- C. when diminishing marginal returns set in, output declines
- D. as more input is applied to a productive enterprise, output decreases

2-14. The relationship between average and marginal physical product means:

- A. average chases the marginal
- B. if marginal is above average, average is decreasing
- C. when marginal = average, average is decreasing
- D. marginal chases the average

2-15. A student who has studied all night to the point of falling asleep during an exam is in what stage of production?

- A. one
- B. two
- C. three
- D. four

2-16. Which of the following changes will change a firm's production function?

- A. changes in the cost of production
- B. changes in technology
- C. changes in the prices of resources available
- D. changes in product prices

Questions 2-17 to 2-26. Wheat Farm.

Below is the production function for a wheat farm, where the input is chemicals (oz) and the output is wheat (bu).

<u>X (oz)</u>	<u>Y (bu)</u>	<u>APP()</u>	<u>MPP()</u>
0	0	--	--
1	10	—	—
2	30	—	—
3	—	13	—
4	44	—	—
5	—	—	1
6	42	—	—

2-17. What is the MPP of using the 4th unit of input?

- A. 7
- B. 2
- C. 3
- D. 5

2-18. What is the APP of using the 6th unit of input?

- A. 5
- B. 7
- C. 3
- D. 2

2-19. What is the MPP of using the 6th unit of input?

- A. 2
- B. -2
- C. 3
- D. -3

2-20. What is the TPP of using the 3rd unit of input?

- A. 9
- B. 20
- C. 13
- D. 39

2-21. What is the TPP of using the 5th unit of input?

- A. 43
- B. 44
- C. 45
- D. 39

2-22. What are the units for TPP?

- A. oz
- B. bu
- C. bu/oz
- D. oz/bu

2-23. What are the units for MPP?

- A. bu
- B. oz
- C. oz/bu
- D. bu/oz

2-24. What are the units for APP?

- A. bu
- B. oz
- C. oz/bu
- D. bu/oz

2-25. What is the TPP of using the 2nd unit of input?

- A. 0
- B. 10
- C. 15
- D. 30

2-26. Diminishing returns set in at what level of input?

- A. $X = 3$
- B. $X = 4$

- C. $X = 5$
- D. $X = 6$

2-27. The production function for the wheat farm represents:

- A. the economic relationship between inputs and outputs
- B. the physical relationship between inputs and outputs
- C. the quantity of chemicals produced
- D. the supply of wheat

2-28. The assumption of *ceteris paribus* refers to:

- A. modus operandi
- B. habeas corpus
- C. scarcity
- D. holding all else constant

2-29. An economist thinks that a county yield contest that rewards high levels of output is:

- A. a good idea, since it provides the correct incentives to growers
- B. not worth the trouble, due to chemicals and fertilizer “burn”
- C. a poor goal, relative to an economic goal
- D. a scarce commodity, where benefits outweigh costs

2-30. The real world is enormously complicated. Therefore:

- A. we use production theory, which is also complex
- B. we must simplify the real world in order to understand it
- C. we use the physical relationship between inputs and outputs
- D. we use the SR instead of the LR

2-31. A typical production function

- A. increases at an increasing rate, then increases at a decreasing rate
- B. increases at an increasing rate, then decreases at a decreasing rate
- C. decreases at an increasing rate, then increases at a decreasing rate
- D. decreases at an increasing rate, then decreases at a decreasing rate

2-32. Marginal Physical Product

- A. is equal to the rate of change in APP
- B. is the rate of change in TPP
- C. is equal to APP for an increasing returns production function
- D. all of the other answers

2-33. If $MPP > APP$:

- A. MPP is increasing
- B. MPP is decreasing
- C. APP is increasing
- D. APP is decreasing

2-34. APP represents:

- A. overall productivity
- B. how productive all of the units of input are
- C. how productive the last unit of input is
- D. scarcity

2-35. MPP represents:

- A. overall productivity
- B. how productive all of the units of input are
- C. how productive the last unit of input is
- D. scarcity

2-36. If average productivity is increasing:

- A. $APP = MPP$
- B. $APP > MPP$
- C. $APP < MPP$
- D. not enough information to answer

2-37. If average productivity is increasing:

- A. MPP is negative and declining
- B. MPP is increasing
- C. MPP is decreasing
- D. not enough information to answer

2-38. Diminishing returns begins to occur where:

- A. TPP increases at an increasing rate
- B. TPP increases at a decreasing rate
- C. TPP decreases at an increasing rate
- D. TPP decreases at a decreasing rate

2-39. In the equation: $Y = f(A | K, L, M)$

- A. land is fixed
- B. land is variable
- C. output is fixed
- D. capital is variable

2-40. The Law of Diminishing Marginal Returns implies that:

- A. US agriculture is in Stage III
- B. marginal productivity will eventually decline
- C. biotechnology will not continue to increase yields
- D. if we add more fertilizer to a wheat field, output will decrease

2-41. Stage II occurs where:

- A. $MPP > APP$ and $MPP > 0$
- B. $MPP < APP$ and $MPP > 0$
- C. $MPP < APP$ and $APP > 0$
- D. $MPP < APP$ and $MPP < 0$

2-42. The Law of Diminishing Returns implies that:

- A. MPP is declining
- B. productivity will eventually decrease
- C. goods are not scarce
- D. TPP will eventually become negative

2-43. In the following production function: $Y = f(L | K, A, M)$:

- A. *ceteris paribus* does not hold
- B. labor is held constant
- C. land is allowed to vary
- D. labor is allowed to vary

2-44. The TPP for using zero units on input is equal to:

- A. 0
- B. depends
- C. not enough information to answer
- D. 1

2-45. APP is defined as:

- A. MPP/X
- B. MPP/Y
- C. TPP/X
- D. TPP/Y

2-46. Rational producers always operate in:

- A. Stage I
- B. Stage II
- C. Stage III
- D. it depends on the situation

2-47. MPP is defined as:

- A. change in output given a change in input
- B. $\Delta TPP/\Delta X$
- C. $\Delta Y/\Delta X$
- D. all of the other answers

2-48. Stage III:

- A. uses too little input
- B. uses resources efficiently
- C. produces too much output
- D. uses too much input

2-49. Stage I:

- A. uses too little input
- B. uses resources efficiently

- C. produces too much output
- D. uses too much input

2-50. In the real world, the Law of Diminishing Marginal Productivity:

- A. does not hold due to economic growth
- B. holds, but only in some locations
- C. does not hold for agriculture, which continues to feed the world
- D. holds, but can be overcome with technological change

CHAPTER 2 ANSWER KEY

1 B	11 C	21 C	31 A	41 B
2 B	12 A	22 B	32 B	42 B
3 C	13 B	23 D	33 C	43 D
4 C	14 A	24 D	34 B	44 A
5 B	15 C	25 D	35 C	45 C
6 B	16 B	26 A	36 C	46 B
7 A	17 D	27 B	37 D	47 D
8 B	18 B	28 D	38 B	48 D
9 D	19 D	29 C	39 B	49 A
10 A	20 D	30 B	40 B	50 D