

MULTIPLE CHOICE QUESTIONS

- Which of the following is considered production in Economics?
 - Tilling of soil
 - Singing a song before friends
 - Preventing a child from falling into a manhole on the road
 - Painting a picture for pleasure
- Identify the correct statement.
 - The average product is at its maximum when marginal product is equal to average product
 - The law of increasing returns to scale relates to the effect of changes in factor proportions
 - Economies of scale arise only because of invisibilities of factor proportions
 - Internal economies of scale can accrue only to the exporting sector
- Which of the following is not a characteristic of land?
 - Its supply for the economy is limited
 - It is immobile
 - Its usefulness depends on human efforts
 - It is produced by our forefathers
- Which of the following statement is true?
 - Accumulation of capital depends solely on income
 - Savings can also be affected by the State
 - External economies go with size and internal economies with location
 - The supply curve of labour is an upward slopping curve
- In the production of wheat, all of the following are variable factors that are used by the farmer except _____
 - the seed and fertilizer used when the crop is planted
 - the field that has been cleared of trees and in which the crop is planted
 - the tractor used by the farmer in planting and cultivating not only wheat but also Corn and barley
 - the number of hours that the farmer spends in cultivating the wheat fields internal economies with location
 - The supply curve of labour is an upward slopping curve
- The marginal product of a variable input is best described as _____.
 - total product divided by the number of units of variable input
 - the additional output resulting from a one-unit increase in the variable input
 - the additional output resulting from a one-unit increase in both the variable and fixed inputs
 - the ratio of the amount of the variable input that is being used to the amount of the fixed input that is being used
- Diminishing marginal returns implies _____.
 - decreasing average variable costs
 - decreasing marginal costs
 - increasing marginal costs
 - decreasing average fixed costs

8. The short run, as economists use the phrase, is characterized by _____.
- at least one fixed factor of production and firms neither leaving nor entering the industry
 - a period where the law of diminishing returns does not hold
 - no variable inputs – that is all of the factors of production are fixed
 - all inputs being variable
9. The marginal, average and total product curves encountered by the firm producing in the short run exhibit all of the following relationships except _____.
- when total product is rising, average and marginal product may be either rising or falling
 - when marginal product is negative, total product and average product are falling
 - when average product is at a maximum, marginal product equals average product and total product is rising
 - when marginal product is at a maximum, average product equals marginal product and total product is rising
10. To economists, the main difference between the short run and the long run is that _____.
- in the short run, all inputs are fixed, while in the long run all inputs are variable
 - in the short run, the firm varies all of its inputs to find the least cost combination of inputs
 - in the short run, at least one of the firm's input levels is fixed
 - in the long run, the firm is making a constrained decision about how to use existing plant and equipment efficiently
11. Which of the following is the best definition of the "production function"?
- The relationship between market price and quantity supplied
 - The relationship between the firm's total revenue and the cost of production
 - The relationship between the quantities of inputs needed to produce a given level of output
 - The relationship between the quantity of inputs and the firm's marginal cost of production
12. The "law of diminishing returns" applies to _____.
- the short run, but not the long run
 - the long run, but not the short run
 - both the short run and the long run
 - neither the short run nor the long run
13. Diminishing returns occur _____.
- when units of a variable input are added to a fixed input and total product falls
 - when units of a variable input are added to a fixed input and marginal product falls
 - when the size of the plant is increased in the long run
 - when the quantity of the fixed input is increased and returns to the variable input falls

Use the following information to answer questions 14–16.

Hours Labour	Total of Output	Marginal Product
0	–	–
1	100	100
2	–	80
3	240	–

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14. What is the total output when 2 hours of labour are employed?
 (a) 80 (b) 100 (c) 180 (d) 200
15. What is the marginal product of the third hour of labour?
 (a) 60 (b) 80 (c) 100 (d) 240
16. What is the average product of the first three hours of labour?
 (a) 60 (b) 80 (c) 100 (d) 240
17. Which cost increases continuously with the increase in production?
 (a) Average cost (b) Marginal cost
 (c) Fixed cost (d) Variable cost
18. Which of the following cost curves is never 'U' shaped?
 (a) Average cost curve (b) Marginal cost curve
 (c) Average variable cost curve (d) Average fixed cost curve
19. Total cost in the short run is classified into fixed costs and variable costs. Which one of the following is a variable cost?
 (a) Cost of raw materials (b) Cost of equipment
 (c) Interest payment on past borrowings (d) Payment of rent on building
20. In the short run, when the output of a firm increases, its average fixed cost _____.
 (a) increases (b) decreases
 (c) remains constant (d) first declines and then rises
21. Which one of the following is also known as planning curve?
 (a) Long run average cost curve (b) Short-run average cost curve
 (c) Average variable cost curve (d) Average total cost curve
22. The cost of one thing in terms of the alternative given up is known as _____.
 (a) production cost (b) physical cost
 (c) real cost (d) opportunity cost
23. With which of the following is the concept of marginal cost closely related?
 (a) Variable cost (b) Fixed cost
 (c) Opportunity cost (d) Economic cost
24. Which of the following statements is correct?
 (a) When the average cost is rising, the marginal cost must also be rising
 (b) When the average cost is rising, the marginal cost must be falling
 (c) When the average cost is rising, the marginal cost is above the average cost
 (d) When the average cost is falling, the marginal cost must be rising
25. Which of the following is an example of an "explicit cost"?
 (a) The wages a proprietor could have made by working as an employee of a large firm
 (b) The income that could have been earned in alternative uses by the resources owned by the firm
 (c) The payment of wages by the firm
 (d) The normal profit earned by a firm
26. Which of the following is an example of an "implicit cost"?
 (a) Interest that could have been earned on retained earnings used by the firm to finance expansion
 (b) The payment of rent by the firm for the building in which it is housed
 (c) The interest payment made by the firm for funds borrowed from a bank
 (d) The payment of wages by the firm

Use the following data to answer questions 27–29.

Output	Total Cost
0	240
1	330
2	410
3	480
4	540
5	610
6	690

27. The average fixed cost of 2 units of output is _____.
 (a) ₹ 80 (b) ₹ 85 (c) ₹ 120 (d) ₹ 205
28. The marginal cost of the sixth unit of output is _____.
 (a) ₹ 133 (b) ₹ 75 (c) ₹ 80 (d) ₹ 450
29. Diminishing marginal returns starts to occur between units _____.
 (a) 2 and 3 (b) 3 and 4 (c) 4 and 5 (d) 5 and 6
30. Marginal cost is defined as _____.
 (a) the change in total cost due to a one unit change in output
 (b) total cost divided by output
 (c) the change in output due to a one unit change in an input
 (d) total product divided by the quantity of input
31. Which of the following is true of the relationship between the marginal cost function and the average cost functions?
 (a) If MC is greater than ATC, then ATC is falling
 (b) The ATC curve intersects the MC curve at minimum MC
 (c) The MC curve intersects the ATC curve at minimum ATC
 (d) If MC is less than ATC, then ATC is increasing
32. Which of the following statements is true of the relationship among the average cost functions?
 (a) $ATC = AFC - AVC$
 (b) $A VC = AFC + ATC$
 (c) $AFC = ATC + AVC$
 (d) $AFC = ATC - AVC$
33. Which of the following is not a determinant of the firm's cost functions?
 (a) The production function
 (b) The price of labour
 (c) Taxes
 (d) The price of the firm's output
34. Which of the following statements is correct concerning the relationships among the firm's cost function?
 (a) $TC = TFC - TVC$
 (b) $TVC = TFC - TC$
 (c) $TFC = TC - TVC$
 (d) $TC = TVC - TFC$
35. Suppose output increases in the short run. Total cost will _____.
 (a) increase due to an increase in fixed costs only
 (b) increase due to an increase in variable costs only
 (c) increase due to an increase in both fixed and variable costs
 (d) decrease if the firm is in the region of diminishing returns

36. Which of the following is true of the short-run cost curves?
 (a) It represents the marginal product of the variable input
 (b) It is derived from the production function
 (c) The short-run cost curves are U-shaped
 (d) As output increases, the short-run cost curves shift upward
37. The negative relationship between the marginal cost curve and the average total cost curve is due to _____.
 (a) Diseconomies of scale
 (b) Diminishing returns
 (c) The difficulty of increasing output
 (d) The increasing marginal cost of production
38. The positively sloped short-run cost curves are due to _____.
 (a) Diseconomies of scale
 (b) Diminishing returns
 (c) The firm's inability to increase output
 (d) The increasing marginal cost of production
39. A firm's average total cost of producing the 6th unit of output is ₹ 20. The firm's marginal cost of producing the 6th unit of output is _____.
 (a) ₹ 20
 (b) ₹ 10
 (c) ₹ 30
 (d) ₹ 40
40. A firm producing 10 units of output has a total cost of ₹ 200. The firm's average total cost of producing 10 units of output is _____.
 (a) ₹ 20
 (b) ₹ 10
 (c) ₹ 30
 (d) ₹ 40
41. A firm has a variable cost of ₹ 50 and a total cost of ₹ 280 when it produces 10 units of output. The firm's average total cost of producing 10 units of output is _____.
 (a) ₹ 280
 (b) ₹ 60
 (c) ₹ 230
 (d) ₹ 20
42. A firm's average total cost of producing 10 units of output is ₹ 60. The firm's marginal cost of producing 10 units of output is ₹ 20. The firm's average variable cost of producing 10 units of output is _____.
 (a) ₹ 60
 (b) ₹ 40
 (c) ₹ 20
 (d) ₹ 80
43. Which of the following is true of the short-run cost curves?
 (a) The services of the variable input are fixed
 (b) Man can create more output by increasing the variable input
 (c) The services of the variable input are fixed
 (d) When a man can create more output by increasing the variable input
44. Which of the following is true of the short-run cost curves?
 (a) Initiating a business is a fixed cost
 (c) Innovating is a variable cost
45. In describing a given firm's short-run cost curves, which of the following is true?
 (a) up to six months
 (c) as long as all inputs are fixed
46. If decreasing returns to a variable input are present, which of the following is true?
 (a) output will also decrease
 (b) output will increase

36. Which of the following statements concerning the long-run average cost curve is false?
- It represents the least cost input combination for producing each level of output
 - It is derived from a series of short-run average cost curves
 - The short-run cost curve at the minimum point of the long-run average cost curve represents the least cost plant size for all levels of output
 - As output increases, the amount of capital employed by the firm increases along the curve
37. The negatively sloped (i.e., falling) part of the long-run average total cost curve is due to which of the following?
- Diseconomies of scale
 - Diminishing returns
 - The difficulties encountered in coordinating the many activities of a large firm
 - The increase in productivity that results from specialization
38. The positively sloped (i.e., rising) part of the long run average total cost curve is due to which of the following?
- Diseconomies of scale
 - Diminishing returns
 - The firm being able to take advantage of large-scale production techniques as it expands its output
 - The increase in productivity that results from specialization
39. A firm's average total cost is ₹ 300 at 5 units of output and ₹ 320 at 6 units of output. The marginal cost of producing the 6th unit is _____.
- ₹ 20
 - ₹ 120
 - ₹ 320
 - ₹ 420
40. A firm producing 7 units of output has an average total cost of ₹ 150 and has to pay ₹ 350 to its fixed factors of production whether it produces or not. How much of the average total cost is made up of variable costs?
- ₹ 200
 - ₹ 50
 - ₹ 300
 - ₹ 100
41. A firm has a variable cost of ₹ 1000 at 5 units of output. If fixed costs are ₹ 400, what will be the average total cost at 5 units of output?
- ₹ 280
 - ₹ 60
 - ₹ 120
 - ₹ 1400
42. A firm's average fixed cost is ₹ 20 at 6 units of output. What will it be at 4 units of output?
- ₹ 60
 - ₹ 30
 - ₹ 40
 - ₹ 20
43. Which of the following statements is true?
- The services of a doctor are considered production
 - Man can create matter
 - The services of a housewife are considered production
 - When a man creates a table, he creates matter
44. Which of the following is a function of an entrepreneur?
- Initiating a business enterprise
 - Risk bearing
 - Innovating
 - All of the above
45. In describing a given production technology, the short run is best described as lasting _____.
- up to six months from now
 - up to five years from now
 - as long as all inputs are fixed
 - as long as at least one input is fixed
46. If decreasing returns to scale are present, then if all inputs are increased by 10% then _____.
- output will also decrease by 10%
 - output will increase by 10%

- (c) output will increase by less than 10%
 (d) output will increase by more than 10%
47. The production function is a relationship between a given combination of inputs and ____.
- another combination that yields the same output
 - the highest resulting output
 - the increase in output generated by one unit increase in one output
 - all levels of output that can be generated by those inputs
48. If the marginal product of labour is below the average product of labour, it must be true that ____.
- the marginal product of labour is negative
 - the marginal product of labour is zero
 - the average product of labour is falling
 - the average product of labour is negative
49. The average product of labour is maximized when marginal product of labour ____.
- equals the average product of labour
 - equals zero
 - is maximized
 - none of the above
50. The law of variable proportions is drawn under all of the assumptions mentioned below except the assumption that ____.
- the technology is changing
 - there must be some inputs whose quantity is kept fixed
 - we consider only physical inputs and not economic profitability in monetary terms
 - the technology is given and stable
51. What is a production process?
- Technical relationship between physical inputs and physical output
 - Relationship between fixed factors of production and variable factors of production
 - Relationship between a factor of production and the utility created by it
 - Relationship between quantity of output produced and time taken to produce the output
52. Laws of production does not include ____.
- returns to scale
 - law of diminishing returns to a factor
 - law of variable proportions
 - least cost combination of factors
53. Identify the fixed cost from the following ____.
- labour cost
 - electricity bill
 - salary of watchman
 - cost of raw materials
54. Which of the following is not an assumption of the law of variable proportions?
- Only one factor is variable.
 - Technique of production remains constant.
 - Proportion of factors of production remains same.
 - Units of variable factor are homogeneous.
55. Which of the following statement is correct?
- Supply of land is perfectly elastic.
 - Fertility of land cannot change.
 - Land does not yield any result unless human efforts are employed.
 - Supply of land can be increase.

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63. Marginal
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65. The law of
 (a) always
 (c) always

56. The production process described below exhibits

Number of Workers	Output
0	0
1	23
2	40
3	50

- (a) constant marginal product of labour
 (b) diminishing marginal product of labour
 (c) increasing return to scale
 (d) increasing marginal product of labour
57. Which of the following is a variable cost in the short run?
 (a) Rent of the factory.
 (b) Wages paid to the factory labour.
 (c) Interest payments on borrowed financial capital.
 (d) Payment on the lease for factory equipment.
58. The efficient scale of production is the quantity of output that minimizes _____.
 (a) average fixed cost
 (b) average total cost
 (c) average variable cost
 (d) marginal cost
59. If marginal cost equals average total cost, _____.
 (a) average total cost is falling
 (b) average total cost is rising
 (c) average total cost is maximized
 (d) average total cost is minimized
60. In the long run, _____.
 (a) all inputs are fixed
 (b) all inputs are variable
 (c) at least one input is variable and one input is fixed
 (d) at most one input is variable and one input is fixed
61. Average product is defined as _____.
 (a) total product divided by the total cost
 (b) total product divided by marginal product
 (c) total product divided by the variable input
 (d) marginal product divided by the variable input
62. The change in the total product resulting from a change in a variable input is _____.
 (a) average cost
 (b) average product
 (c) marginal cost
 (d) marginal product
63. Marginal product, mathematically, is the slope of the _____.
 (a) total product curve
 (b) average product curve
 (c) marginal product curve
 (d) implicit product curve
64. Suppose the first four units of a variable input generate corresponding total outputs of 200, 350, 450, 500. The marginal product of the third unit of input is _____.
 (a) 50
 (b) 100
 (c) 150
 (d) 200
65. The law of diminishing marginal returns indicates that marginal return _____.
 (a) always diminish
 (b) eventually diminish
 (c) always diminish before increasing
 (d) never diminish before increasing

66. Diminishing marginal returns for the first four units of a variable input is exhibited by the total product sequence _____.
- (a) 50, 50, 50, 50 (b) 50, 110, 180, 260
(c) 50, 100, 150, 200 (d) 50, 90, 120, 140
67. If marginal product is equal to average product, then _____.
- (a) marginal product is increasing (b) marginal product is decreasing
(c) average product is decreasing (d) average product is not changing
68. In the third of the three stages of production _____.
- (a) the marginal product curve has a positive slope
(b) the marginal product curve lies completely below the average product curve
(c) total product increases
(d) marginal product is positive
69. When marginal cost are below average total costs _____.
- (a) average fixed costs are rising (b) average total costs are falling
(c) average total costs are rising (d) average total costs are minimized
70. If the average cost is falling, then _____.
- (a) marginal cost is rising
(b) marginal cost is falling
(c) marginal cost is equal to average cost
(d) it is impossible to tell if marginal cost is rising or falling
71. In the long run, if a very small factory were to expand its scale of operations, it is likely that it would initially experience _____.
- (a) an increase in pollution level (b) diseconomies of scale
(c) economies of scale (d) constant returns to scale
72. The difference between average total cost and average variable cost _____.
- (a) is constant (b) is total fixed cost
(c) gets narrow as output decreases (d) is the average fixed cost
73. In the long run, some firms will exit the market if the price of the good offered for sale is less than _____.
- (a) marginal revenue (b) marginal cost
(c) average total cost (d) average revenue
74. The marginal cost for a firm of producing the 9th unit of output is ₹ 20. Average cost at the same level of output is ₹ 15. Which of the following must be true?
- (a) Marginal cost and average cost are both falling.
(b) Marginal cost and average cost are both rising.
(c) Marginal cost is rising and average cost is falling.
(d) It is impossible to tell if either of the curves are rising or falling.
75. Labour is defined as _____.
- (a) any work done without remuneration
(b) any exertion of mind or body to get some reward
(c) helping the mother
(d) helping the friends
76. The most important function of an entrepreneur is to _____.
- (a) innovate (b) bear the sense of responsibility
(c) finance (d) earn profit

77. Which one of the following is a factor of production?
- (a) Land (b) The sun
(c) Capital (d) Capital
78. Which one of the following is a factor of production?
- (a) Land (b) Labour
(c) Risk in business (d) The sun
79. Marginal cost curve is _____.
- (a) total cost curve (b) variable cost curve
(c) average total cost curve (d) average variable cost curve
80. Which of the following is a fixed cost?
- (a) Fixed cost (b) If we add more units of variable inputs
(c) Marginal cost (d) Total cost
81. Which of the following is a short-run cost curve?
- (a) The LAC curve (b) Total Revenue curve
(c) Opportunity cost curve (d) If total revenue is zero
82. The average product of labour is _____.
- (a) AC and TC (b) AP and MP
(c) AP and MP (d) AP and MP
83. Rectangular hypotenuse cost curve is _____.
- (a) TFC (b) AVC
(c) MC (d) ATC
84. If one unit of labour and capital give 400 units of output, then this is a case of _____.
- (a) constant returns to scale (b) increasing returns to scale
(c) decreasing returns to scale (d) constant returns to scale
85. The vertical distance between the MC curve and the ATC curve is _____.
- (a) MC (b) ATC
(c) AVC (d) AFC
86. The law of variable proportions states that _____.
- (a) there are only two factors of production
(b) there is a fixed amount of one factor of production
(c) all factors are variable
(d) variable factor is labour
87. _____ is an implicit cost.
- (a) Wages of the entrepreneur
(b) Interest on borrowed capital
(c) Interest on owner's capital
(d) Depreciation of fixed capital

77. Which one of the following is correct?
- Land is produced by man's efforts.
 - The supply of land is not constant.
 - Capital is not result of savings.
 - Capital refers to the produced means of production.
78. Which one of the following is incorrect?
- Land has original and indestructible powers to produce.
 - Labour has poor bargaining power.
 - Risk in a business concern can be insured.
 - The supply of land is not constant.
79. Marginal cost change due to changes in _____.
- total cost
 - average cost
 - variable cost
 - quantity of output
80. Which of the following statements is correct?
- Fixed costs vary with change in output.
 - If we add total variable cost and fixed cost we get the average cost.
 - Marginal cost is the result of total cost divided by number of units produced.
 - Total cost is obtained by adding up the fixed cost and total variable cost.
81. Which of the following statements is incorrect?
- The LAC curve is also called the planning curve of a firm.
 - Total Revenue = Price Per Unit \times Number of Units Sold.
 - Opportunity cost is also called alternative cost.
 - If total revenue is divided by the number of units sold we get marginal revenue.
82. The average profit is equal to the difference between _____.
- AC and TC
 - AC and VC
 - AC and AR
 - AC and TR
83. Rectangular hyperbola is the shape of _____.
- TFC
 - AFC
 - FC
 - MC
84. If one unit of labour and one unit of capital give 200 units of output, two units of labour and two units of capital give 400 units of output and 5 units of labour and five units of capital give 1000 units of output, then this is a case of _____.
- constant returns to scale
 - increasing returns to scale
 - decreasing returns to scale
 - none of these
85. The vertical difference between TVC and TC is equal to _____.
- MC
 - AVC
 - TFC
 - none of these
86. The law of variable proportions come into being when _____.
- there are only two variable factors
 - there is a fixed factor and a variable factor
 - all factors are variable
 - variable factors yield less
87. _____ is an implicit cost of production.
- Wages of the labour
 - Charges for electricity
 - Interest on owned money capital
 - Payment for raw material

88. Bozzo's burgers are a small restaurant and a price taker. The table below provides the data of Bozzo's and costs in Rupees.

Qty.	0	10	20	30	40	50	60
T.C.	100	210	300	400	540	790	1060
TFC							
TVC							
AVC							
ATC							
MC							

If burgers sell for ₹ 14 each, what is Bozzo's profit maximizing level of output _____.

- (a) 10 burgers
 - (b) 40 burgers
 - (c) 50 burgers
 - (d) 60 burgers
89. What is the total variable cost when 60 burgers are produced?
- (a) ₹ 690
 - (b) ₹ 960
 - (c) ₹ 110
 - (d) ₹ 440
90. What is average fixed cost when 20 burgers are produced?
- (a) ₹ 5
 - (b) ₹ 3.33
 - (c) ₹ 10
 - (d) ₹ 2.5
91. Between 10 to 20 burgers, what is the marginal cost (per burger)?
- (a) ₹ 11
 - (b) ₹ 13
 - (c) ₹ 14
 - (d) ₹ 9

Use Table to answer questions 92 to 93.

Hours of Labour	Total Output	Marginal Product
0	0	0
1	200	200
2	-	160
3	480	-

92. What is the total output when 2 hours of labour are employed?
- (a) 160
 - (b) 200
 - (c) 360
 - (d) 400
93. What is the marginal product of the third hour labour?
- (a) 120
 - (b) 160
 - (c) 200
 - (d) 480
94. The law of diminishing returns _____.
- (a) states that beyond some level of a variable input, the average product of that variable input begins to increase steadily
 - (b) assumes that there is technological improvement over time
 - (c) states that beyond some level of a variable input, the marginal product of that variable input begins to decrease steadily
 - (d) informs a firm whether or not to use a factor input
95. When _____ the firms must be producing at the minimum point of the average cost curve and so the firm is productive efficiency.
- (a) AC = AR
 - (b) MC = AC
 - (c) MC = MR
 - (d) AR = MR

96. Suppose that a sole proprietorship is earning total revenues of ₹ 120,000 and is incurring explicit costs of ₹ 90,000. If the owner could work for another company for ₹ 50,000 a year, we would conclude that _____.

- (a) the firm is incurring an economic loss
- (b) implicit costs are ₹ 90,000
- (c) the total economic costs are ₹ 100,000
- (d) the individual is earning an economic profit of ₹ 25,000

Use Table to answer questions 97 to 98.

Hours of Labour	Total Output	Marginal Product
0	0	0
1	300	300
2	—	240
3	720	—

97. What is the total output when 2 hours of labour are employed?

- (a) 160
- (b) 200
- (c) 360
- (d) 540

98. What is the marginal product of the third hour of labour?

- (a) 120
- (b) 160
- (c) 200
- (d) 180

99. All of the following are U shaped curves except the _____.

- (a) AVC curve
- (b) AFC curve
- (c) AC curve
- (d) MC curve

100. The following are some of the costs of a clothing manufacturer. State which among them will you consider as fixed cost?

- (a) Cost of cloth.
- (b) Piece wages paid to workers.
- (c) Depreciation on machines owing to time.
- (d) Cost of electricity for running machines.

variable input begins to

that variable begins to

cost curve and so there

ANSWERS WITH DETAILED REASONING

Note: In CA FOUNDATION exam, there is no need to give reasons. These reasons are given only for the understanding of the students.

Ans. 1 (a)

Since tilling of soil is an economic activity.

Ans. 2 (a)

When AP is maximum, then $MP = AP$, or say MP curve cuts the AP curve at its maximum point.

Ans. 3 (d)

Land is free gift of nature. It is not produced by our forefathers.

Ans. 4 (b)

Since government also earn income, it can also effect savings.

Ans. 5 (b)

Land is a fixed factor as it cannot be changed with level of output.

Ans. 6 (b)

The MP of a variable input is best described as the additional output resulting from a one unit increase in the variable input.

Ans. 7 (c)

Diminishing marginal returns implies increase in costs hence increasing marginal costs.

Ans. 8 (a)

The short run, as economists use the phrase, is characterized by at least one fixed factor of production and firms neither leaving nor entering the industry. Remember law of variable proportion is applicable in short period.

Ans. 9 (d)

The firm producing in the short run will not exhibit that when marginal product is at a maximum, average product equals marginal product, and total product is rising.

Ans. 10 (c)

The short run, as economists use the phrase, is characterized by at least one fixed factor of production and firms neither leaving nor entering the industry. Remember law of variable proportion is applicable in short period.

Ans. 11 (c)

The best definition of the production function is "the relationship between the quantities of inputs needed to produce a given level of output".

Ans. 12 (a)

The "law of diminishing returns" is a part of law of variable proportion which applies to the short run, but not the long run.

Ans. 13 (b)

Diminishing returns (stage-II) occur when units of a variable input are added to a fixed input and MP falls.

Ans. 14 (c)

$$100 + 80 = 180$$

Hours of Labour	Total Output	Marginal Product
0
1	100	100
2	180 (100 + 80)	80
3	240	60(240 - 180)

Ans. 15 (a)

$$240 - 180 = 60$$

Ans. 16 (b)

$$\frac{TP}{\text{Hours of Labour}} = \frac{240}{3} = 80$$

Ans. 17 (d)

Variable costs are directly related with the level of production. Thus, with the increase in the level of production variable cost also increases.

Ans. 18 (d)

With increase in production, AFC always falls.

Ans. 19 (a)

Cost of raw material changes with change in level of output.

Ans. 20 (b)

In the short run, when the output of a firm increases, its AFC decreases.

Ans. 21 (a)

LAC is also known as planning curve because a firm plans to produce any output in the long run by choosing a plant on the long run average cost curve corresponding to the given output.

Ans. 22 (d)

The cost of one thing in terms of the alternative given up is known as an opportunity cost.

Ans. 23 (a)

MC depends upon TC and TC changes with changes in VC.

Ans. 24 (c)

In the relationship between AC and MC when the AC is rising, the MC is above the AC.

Here (a) is also correct.

Ans. 25 (c)

Explicit cost is the payment made to the external factors of production. Hence, the payment of wages by the firm is an explicit cost.

Ans. 26 (a)

Implicit cost is the cost of self-supplied factors of production. Hence, interest that could have been earned on retained earnings used by the firm to finance expansion is implicit cost.

Ans. 27 (C)

Output	TC	FC	AFC	MC
0	240	240		
1	330	240	240	90
2	410	240	120	80
3	480	240	80	70
4	540	240	60	60
5	610	240	48	70
6	690	240	40	80

The above table is short run cost table and in the above table, AFC at 2 units of output is $120 (240/2)$.

Ans. 28 (c)

In the above table, MC at 6 unit is $690 - 610 = 80$.

Ans. 29 (c)

When diminishing marginal returns start in stage-II under law of variable proportion, then MC increases and here MC increase from 60 to 70 at the output 4 and 5 units.

Ans. 30 (a)

Marginal cost is defined as the change in total cost due to a one unit change in output.

Ans. 31 (c)

When AC is minimum, then $MC = AC$. In other words, MC curve cut to AC curve at its minimum point.

Ans. 32 (d)

$ATC = AFC + AVC$; hence, $AFC = ATC - AVC$.

Ans. 33 (d)

The price of the firm's output is not a determinant of the firm's cost functions.

Ans. 34 (c)

Total Fixed Cost = Total Cost - Total Variable Cost.

Ans. 35 (b)

In short run, only variable cost increase and fixed cost remains the same.

Ans. 36 (c)

The statement 'the short-run cost curve at the minimum point of the long-run average cost curve represents the least cost plant size for all levels of output' is not correct.

Ans. 37 (d)

In the long run, firm achieve specialisation; hence, the negatively sloped (i.e., falling) part of the long-run average total cost curve is due to the increase in productivity that results from specialization.

Ans. 38 (a)

In the long run, economies turns into diseconomies; hence, the positively sloped (i.e., rising) part of the long run average total cost curve is due to diseconomies of scale.

Ans. 39 (d)

$$TC = AC \times Q$$

$$AC \times Q = TC \quad MC$$

$$300 \times 5 = 1500 \quad -$$

$$320 \times 6 = 1920 \quad 420$$

Ans. 40 (d)

$$AVC = AC - AFC$$

$$150 - 50^* = ₹ 100$$

$$*AFC = FC/\text{units}$$

$$350/7 = 50$$

Ans. 41 (a)

$$ATC = AFC + AVC$$

$$280 = 200 + 80$$

Ans. 42 (b)

$$FC = AFC \times Q$$

$$120 = 20 \times 6$$

AFC at 4 units of output

$$FC/Q = 120/4 = 30$$

Ans. 43 (a)

The statement that the services of a doctor are considered production is correct.

Ans. 44 (d)

An entrepreneur has to initiate a business enterprise, bear the risk and innovate products.

Ans. 45 (d)

In the short period, one factor remains fixed and the other is variable.

Ans. 46 (c)

In case of decreasing returns, the output increases less than the change in input. If inputs are increased by 10%, then output will increase by less than 10%.

Ans. 47 (b)

The production function is a relationship between a given combination of inputs and the highest resulting output.

Ans. 48 (c)

If the marginal product of labour is below the average product of labour, it must be true that the average product of labour is falling.

Ans. 49 (a)

The AP of labour is maximized when MP of labour equals the AP of labour.

Ans. 50 (a)

In the law of proportion, the assumption is that the technology does not change.

Ans. 51 (a)

Production process (function) is the relationship between input & output.

Ans. 52 (d)

Law of production does not include least cost combination of factors.

Ans. 53 (c)

Salary of watchman is example of the fixed cost.

Ans. 54 (c)

Proportion of factors of production remain same is an assumption of the law of returns to scale.

Ans. 55 (c)

Land does not yield (produce) anything unless human efforts are employed is correct statement.

Ans. 56 (b)

It is the case of diminishing marginal product because marginal output decrease here.

No.	Total Output	Marginal Output
0	0	0
1	23	23
2	40	17
3	50	10

Ans. 57 (b)

Wages is an example of variable cost.

Ans. 58 (b)

The efficient output point is that point where Average Total Cost (ATC) is minimum.

Ans. 59 (d)

When $MC = ATC$, the ATC is minimum because MC cuts (equal) to ATC at its minimum point.

Ans. 60 (b)

In the long run, all inputs are variable and can be changed in same proportion.

Ans. 61 (c)

$$AP = \frac{TP}{\text{Variable Input (Labour)}}$$

Ans. 62 (d)

$$MP = \frac{TP}{\text{Variable Input (Labour)}}$$

Ans. 63 (a)

MP is the slope of TP curve.

Ans. 64 (b)

Third unit will be $450 - 350 = 100$.

Ans. 65 (b)

Under law of diminishing marginal returns, marginal returns eventually diminish (always diminish only in 2nd stage).

Ans. 66 (d)

TP - 50, 90, 120, 140 and MP 0, 40, 30, 20 are in diminishing way, so law of diminishing marginal returns apply here.

Ans. 67 (d)

If $MP = AP$, then AP remain constant and AP is not changing.

Ans. 68 (b)

In the third stage, MP become negative and TP decrease, so we can say $MP < AP$.

Ans. 69 (b)

When $MC < ATC$, ATC curve is falling.

Ans. 70 (d)

If AC is falling, then MC may be rising, falling or equal to AC, so it is impossible to tell that MC is falling or rising.

Ans. 71 (c)

In the long run, initially law of increasing returns to scale apply, so cost decreases and economics of scale arises.

Ans. 72 (d)

$$ATC = AFC + AVC, \text{ so } ATC - AFC = AVC.$$

Ans. 73 (c)

In the long run if $P < ATC$, then some firms will exit the market, and in the short run if $P < AVC$, then same firms will exit the market.

Ans. 74 (b)

MC is 20 and AC is 15, and if $MC > AC$, then MC & AC are both raising.

Ans. 75 (b)

Labour is defined as any physical or mental work to get some reward.

Ans. 76 (b)

'Bear the sense of responsibility' reflects 'risk bearing' capacity and it is most important function of an entrepreneur.

Ans. 77 (d)

Capital consists that part of production which used for further production. Other are incorrect.

Ans. 78 (d)
Supply & demand are inelastic.

Ans. 79 (c)
In the short run, MC change due to change in VC because $MC = \Delta TVC / \Delta Q$.

Ans. 80 (d)
 $TC = TFC + TVC$, other are incorrect.

Ans. 81 (d)
Correct is that = $\frac{TR}{\text{Number of Units Sold}} = AR$, not MR.

Ans. 82 (c)
The average profit is equal to the difference between AC and AR, it is also called super profits.

Ans. 83 (b)
Rectangular hyperbola is the shape of AFC in which at every points TFC remain the same.

No of units (Capital + Labour)	TP	MP
0
1 + 1	200	200
2 + 2	400	200

Ans. 84 (a)

No of units (Capital + Labour)	TP	MP
3 + 3	600	200
4 + 4	800	200
5 + 5	1000	200

Since both the fixed and variable factors are increasing in the same proportion, a case of returns to scale and also the MP is constant, thus there are constant returns to scale.

Ans. 85 (c)
 $TPC = TC - TVC$

Ans. 86 (b)
The law of variable proportion explains the change in output when one factor is kept constant while the other factors are changed. Thus, there should be at least one fixed factor while others may be variable.

Ans. 87 (c)
Implicit cost is the cost of self-supplied factors of production. Hence, interest on owned money capital is implicit cost.

Ans. 88 (b)
Profit maximization condition $MR = MC$. The Marginal Cost (14) = Marginal Revenue (14).

Quantity	Total Cost	Fixed Cost	Variable Cost	Average Cost	Average Variable Cost	Marginal Cost
0	100	100	-	-	-	-
10	210	100	110	11	21	11
20	300	100	200	10	15	9
30	400	100	300	10	13.33	10
40	540	100	440	11	13.5	14
50	790	100	690	13.8	15.8	25
60	1060	100	960	16	17.66	27

Ans. 89 (b)
Refer to the table in answer 64.

Ans. 90 (a)
 $\frac{TPC}{\text{Number of units}} = 5$
 $\frac{100}{20} = 5$

Ans. 91 (d)
Refer to the table in answer 65.

$$\frac{ATC}{AQ} = \frac{300 - 210}{20 - 10}$$

Ans. 92 (c)
 $200 + 160 = 360$

Hours of Labour	Total Output	Marginal
0
1	200	200
2	360 (200 + 160)	160
3	480	120 (480 - 360)

Ans. 93 (a)
 $480 - 360 = 120$

Ans. 94 (c)
The law of diminishing returns states that beyond some level of a variable input, the marginal product of that variable begins to decrease steadily.

Ans. 95 (b)
MC intersects AC at its lowest point. So, when $MC = AC$, we know that the firms

must produce at the minimum point of the average cost curve, and so there a productive efficiency.

Ans. 96 (a)
Economic Cost = ₹ 90000 + ₹ 50000 = ₹ 140000
Economic Revenue = ₹ 120000
Economic loss = ₹ 140000 - ₹ 120000 = ₹ 20000

Ans. 97 (d)
 $300 + 240 = 540$

Hours of Labour	Total Output	Marginal Product
0
1	300	300
2	540 (300 + 240)	240
3	720	180 (720 - 540)

Ans. 98 (d)
 $720 - 540 = 180$

Ans. 99 (b)
All the cost curves are U-shaped except the average fixed cost curve. Fixed cost is constant, but with the every increase in output, average fixed cost decreases. Thus, it assumes the shape of hyperbola.

Ans. 100 (c)
Fixed costs are the costs which are not related with the level of production whereas variable costs are directly related with the level of production. Here, the depreciation charged on machinery remains same for years until and unless additions to machinery are made.