EXTERNAL EXAMINER: Mr Marcel Kohler
INTERNAL EXAMINERS: Members of the School

INSTRUCTIONS TO CANDIDATES: This paper consists of ONE section and is 27 pages long.

MULTIPLE CHOICE QUESTIONS
1. Answer as many of the questions as possible.
2. Choose the most correct answer in each case.
3. There is no negative marking.
4. Enter your answers on the MCQ Answer Sheet.
5. Complete the Student number and Seat number blocks. Remember to fill in the squares corresponding to your student number.
6. All entries on the MCQ answer sheet MUST BE IN HB PENCIL. Entries in pen will not be recorded by the scanner and marks will thus be lost.
7. Read each question fully before attempting to answer it.
1. The main economic problem is:
   a) security.
   b) unemployment.
   c) inflation.
   d) poverty.
   e) scarcity.

2. Which of the following is NOT a microeconomic question?
   a) Can firm A increase its profits by increasing its output?
   b) If firm B buys more input from a foreign country, will that reduce its costs?
   c) If Sam reduces the hours of labour he supplies in the factor market, will he
      still earn enough income to afford to live in his current flat?
   d) If the unemployment rate in South Africa falls, will that reduce the poverty
      rate?
   e) What will happen to the quantity of electricity demanded if the price of
      electricity increases?

3. Assume you are offered a job in a restaurant that earns you R100 a day plus
   you can order food to the value of R30. Your next best job offer is being a
   sales assistant in a clothing shop that pays R110 per day. If you choose the
   restaurant job then the opportunity cost of this choice – ceteris paribus - is:
   a) R110 per day plus the wages from all other jobs you may have been
      offered.
   b) R110 less the R30 you are being paid for in the form of food.
   c) R110.
   d) R110 less the wages you would have been paid from a third job offer.
   e) The R30 you are receiving to buy food.

4. Which of the following is an example of the fallacy of composition?
   a) Conducting a statistical investigation into how increasing the number of
      staff employed at a firm, with all other relevant factors remaining the same,
      may increase output.
   b) Assuming that because it was raining before the sun came out, that rain
      causes the sun to shine.
   c) One cellphone company tries to increase profits by introducing a product
      feature but all other firms also introduce new product features and they all
      end up earning lower profits.
   d) Taking an action and then calculating the highest-valued alternative
      forgone.
   e) Calculating the benefit received from consuming one more unit of a good
      and setting it equal to the cost of producing that extra unit.
5. The expression that means "after this, therefore because of this" is:
   a) the fallacy of composition.
   b) normative economics.
   c) ceteris paribus.
   d) the post hoc fallacy.
   e) positive economics.

6. Which of the following statements is true?
   a) Labour earns interest and an example of capital is gold mined from underground.
   b) The quality of labour can also be referred to as the level of financial capital of labour.
   c) Entrepreneurship earns profit and is a human resource.
   d) Land earns interest and includes water, forests and fish in the ocean.
   e) Labour earns rent and includes the physical and mental efforts of all human workers.

7. When Tom makes the statement that the government should increase the value of social grants, he is:
   a) making a rational choice.
   b) making a positive statement.
   c) making a normative statement.
   d) answering the 'where' part of one of the two big economic questions.
   e) building and testing an economic model.

8. When a car manufacturer decides to change his production facility to include more machinery and less labour the manufacturer is answering the ___ part of one of the two big economic questions.
   a) when
   b) for whom
   c) what
   d) where
   e) how
Use the diagram below to answer Questions 9 and 10.

9. Which of the following statements is correct?
   a) The slope of curve A is 1 and the slope of curve B is 0.
   b) The slope of curve A is 1 and the slope of curve B is \( \frac{1}{2} \).
   c) The slope of curve A is \( \frac{1}{2} \) and the slope of curve B is 0.
   d) The slope of curve A is \(-\frac{1}{2}\) and the slope of curve B is 0.
   e) The slope of curve A is -1 and the slope of curve B is 1.

10. Which of the following statements regarding line A is correct?
    a) It shows that total production is unrelated to expenditure on capital goods.
    b) It shows that total production is inversely related to expenditure on capital goods.
    c) It shows that total production is negatively related to expenditure on capital goods.
    d) It shows that total production is directly related to expenditure on capital goods.
    e) Both b) and c) are correct.
11. Which of the following statements is correct?
   a) Point E represents an underutilisation of resources.
   b) Point C represents an efficient utilisation of resources.
   c) Point C is currently unattainable but can be reached if there is an improvement in technology.
   d) There is a decreasing opportunity cost of producing more units of good X.
   e) There is an increasing opportunity cost of producing more units of good Y.

12. Which of the following movements requires the largest opportunity cost, in terms of good Y forgone, per extra unit of good X?
   a) From point B to point A.
   b) From point D to point B.
   c) From point B to point D.
   d) From point A to point B.
   e) None of the above statements is correct.

13. Allocative efficiency is:
   a) represented by a point beyond the PPF.
   b) represented when marginal cost equals marginal benefit.
   c) represented by a point below the PPF provided at least one unit of each good is being produced.
   d) when goods are not necessarily produced at the lowest possible cost but they provide the greatest possible benefit.
   e) Both b) and d) are correct.
14. Production efficiency is:
   a) represented by a point beyond the PPF as it shows the level of output that can be achieved.
   b) represented by a point below the PPF as this shows that the combination of goods is affordable.
   c) achieved when the output of one good is increased at the same time that output of all other goods is increased.
   d) represented by a point on the PPF as this shows that output has been maximised given the available resources.
   e) achieved by decreasing the output and cost of all goods in the economy.

Use the diagram below to answer Questions 15.

15. The marginal cost of moving from point A to B is:
   a) 12 units of X.
   b) 6 units of Y.
   c) 2 units of X.
   d) 8 units of Y.
   e) There is no marginal cost.

16. Smoking is considered a negative consumption externality because it harms:
   a) smokers who could suffer lung cancer as a result.
   b) smokers who now have less funds to purchase other healthy consumer goods.
   c) society whose valuable resources are used to produce a harmful product.
   d) non-smokers who receive no compensation.
   e) the government who have to impose taxes on cigarettes.
17. The principle of diminishing marginal benefit can be best explained as follows:
   a) the more units we have consumed of a good then the benefit we receive from consuming one more unit of the good, decreases.
   b) the more units we have consumed of a good then the benefit we receive from consuming one more unit of the good, increases.
   c) the more units we have consumed of a good then the benefit we receive from consuming one more unit of the good, is the same.
   d) the total benefit a consumer obtains from their total consumption of a good will be higher today compared to what it was yesterday.
   e) the total benefit from obtaining more unit of a good or service remains the same as more is consumed.

18. Increasing technology in South Africa would most likely result in:
   a) the PPF becoming flatter.
   b) the PPF becoming steeper.
   c) the PPF shifting outwards.
   d) the PPF shifting inwards.
   e) increasing opportunity cost.

19. A production possibilities frontier represented by a downward-sloping straight line means that:
   a) increasing opportunity costs are being experienced.
   b) there are no trade-offs.
   c) allocative efficiency can be achieved at a point below the production possibilities frontier.
   d) there are no opportunity costs.
   e) similar inputs are used to produce the goods in similar proportions.

20. Which of the following statements regarding the circular flow of economic activity is true?
   a) Firms buy goods and services in the factor market.
   b) Firms sell factors of production in the factor market.
   c) Households sell goods and services in the goods market.
   d) Households pay firms for their factors of production.
   e) Firms buy factors of production in the factor market.

21. As the price of wheat increases, ceteris paribus, the:
   a) supply of wheat will increase, and its price will fall.
   b) demand for wheat will decrease.
   c) demand for bread will decrease.
   d) supply of bread will decrease, and the bread price will rise.
   e) price of bread will decrease, and the quantity demanded will rise.
22. If the price of coffee creamer, a complement in the consumption of coffee, falls then:
   a) the supply curve for coffee creamer will shift to the left.
   b) the profit of firms manufacturing coffee will fall.
   c) the equilibrium quantity and price of coffee will not change.
   d) the demand curve for coffee will shift to the right.
   e) the demand curve for coffee creamer will shift to the left.

23. As the opportunity cost of a good increases, people buy:
   a) less of that good but also less of its substitutes.
   b) less of that good but more of its compliments.
   c) less of that good but more of its substitutes.
   d) More of that good but less of its compliments.
   e) More of that good and more of its compliments.

24. Consider the following statements:

   i. There is an improvement in the technology for producing cars.
   ii. There is an increase in the price of cars.
   iii. There is an increase in the price of an input used to produce cars.
   iv. A new car producer enters the market.

Which of the above would shift the supply curve for cars?
   a) ii only.
   b) i, ii, iii and iv.
   c) i only.
   d) i and iv only.
   e) i, iii and iv only.
The diagram below shows the demand and supply of chocolate bars. Use the diagram to answer Questions 25.

25. The change in equilibrium from E₁ to E₂ could have been brought about by:
   a) a decrease in the price of chocolate milkshake (a substitute in consumption for chocolate bars) and a decrease in the price of milk which is a factor of production for chocolate bars.
   b) a decrease in consumers' income and a decrease in the price of cocoa which is a factor of production for chocolate bars.
   c) greater health awareness which has resulted in less consumption of chocolate bars and a decrease in the price of health bars (a substitute in production for chocolate bars).
   d) an increase in the size of the population that eats chocolate bars and an increase in rainfall which increases the amount of milk and cocoa that firms have to produce chocolate bars.
   e) an increase in consumers' income and a decrease in the number of suppliers of chocolate bars.
26. Amazulu are playing against Kaizer Chiefs at Moses Mabhida Stadium. The ticket price is set at R300 however some supporters are willing to pay up to double that to see the match. In economic terms this problem results from:
   a) excess demand at the free market equilibrium price of tickets.
   b) a price ceiling.
   c) the imposition of a maximum price above the free market equilibrium price of tickets.
   d) an unfair distribution of tickets.
   e) a price floor.

Use the diagram below to answer question 27

![Diagram](image)

27. The diagram above shows the demand and supply curves for South African wildlife safaris by foreign visitors. Assuming everything else remains unchanged, the equilibrium price of South African safaris will increase if:

a) the price of labour in the South African tourism sector increases.

b) the price of air travel, a complement, increases.

c) the supply of South African safaris increases.

d) the price of South African train trips, a substitute in consumption, falls.

e) the price of safaris in another country, such as Kenya, falls.

28. If a market is initially perfectly competitive but then the government intervenes and introduces a minimum wage, then this is most likely to:

a) reduce the deadweight loss to society.

b) increase the profit of firms.

c) result in labour unions calling all labourers to go on strike.

d) result in the quantity demanded of labour being more than quantity supplied of labour at the minimum wage level.

e) result in some workers becoming unemployed.
29. If a market is initially perfectly competitive but then the government intervenes and introduces a minimum wage, then this is most likely to:
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   c) result in labour unions calling all labourers to go on strike.
   d) result in quantity demanded of labour being more than quantity supplied of labour at the minimum wage level.
   e) result in some workers becoming unemployed.

30. Consider the following statements.
   i. An increase in both demand and supply can result in no change in the equilibrium price.
   ii. A decrease in the equilibrium quantity will always result in a decrease in the equilibrium price.
   iii. A decrease in demand and an increase in supply will always result in a decrease in the equilibrium price.
   iv. An increase in demand and a decrease in supply will always result in a decrease in the equilibrium price.

Which of the above statements are correct?
   a) ii and iii only.
   b) i, ii, iii and iv.
   c) i, ii and iii only.
   d) i and iv only.
   e) i, iii and iv only.

31. The price elasticity of demand measures the responsiveness:
   a) of a good's price to a change in quantity demanded.
   b) of quantity supplied to a change in a good's price.
   c) of supply to a change in demand.
   d) of quantity demanded to a change in a good's price.
   e) of quantity supplied to a change in quantity demanded.

32. If the demand curve for a good is a downward sloping straight line that intersects both the Y and the X axes at a value of 6, then at a price of:
   a) R4 demand is relatively more price elastic than at a price of R5.
   b) R1 demand is relatively more price elastic than at a price of R3.
   c) R6 demand is relatively more price inelastic than at a price of R3.
   d) R3 demand is unitary price elastic.
   e) R6 demand is unitary price elastic.
33. If Mittal Steel lowers the price to increase their total revenue, they know that:
   a) the demand for steel is price elastic.
   b) the production of steel will fall.
   c) there will be no change in the production of steel.
   d) the demand for steel is unit price elastic.
   e) the demand for steel is price inelastic.

34. If the cross-price elasticity of demand between two goods is negative, then:
   a) the two goods are substitutes.
   b) as the price of one good rises, the quantity demanded of the other good
      also rises.
   c) as the price of one good changes, there is no change in the quantity
      demanded of the other good.
   d) the two goods are often used together by consumers.
   e) None of the above statements is correct.

35. The price of good A increases from R2 to R6. It is observed that the
    quantity of good B decreases from 1,000 units to 800 units and the
    quantity of good A decreases from 500 units to 350 units. From this we
    can conclude that the cross price elasticity of demand (using the arc
    elasticity formula) between good A and good B is:
    a) + 0.22.
    b) +4.5.
    c) -2.22.
    d) − 0.22.
    e) -0.353

36. Jack’s income has increased from R10,000 to R14,000 per month. As a
    result, he has decreased his consumption of chips from 10 to 6 packets a
    month, and his consumption of hamburgers has increased from 6 to 12 a
    month. Based on these data, which of the following statements is true?
    a) The income elasticity of demand for chips is -0.333.
    b) The income elasticity of demand for chips is -1.2.
    c) The income elasticity of demand for hamburgers is 0.5.
    d) The income elasticity of demand for hamburgers is -1.5.
    e) Both a) and d) are correct.
37. Which of the following statements regarding the elasticity of supply is correct?
   a) A magnitude of 1.5 represents price elastic supply that can be illustrated by a horizontal graph.
   b) A magnitude of 0.5 represents a price inelastic supply that can be illustrated by a vertical graph.
   c) A magnitude of 0.5 represents a price inelastic supply that can be illustrated by a graph that passes through the origin.
   d) A magnitude of 1 represents a unitary price elastic supply that can be illustrated by a graph that passes through the origin.
   e) None of the above is correct.

38. If the quantity supplied of hats increases by 15 percent and the price elasticity of supply is calculated as 0.75 then we know that the price of hats:
   a) decreased by 11.25 percent.
   b) increased by 20 percent.
   c) increased by 11.25 percent.
   d) increased by 10 percent.
   e) decreased by 20 percent.

39. If the demand for a product is more price elastic than its supply, then an excise tax on that product will be borne:
   a) equally by producers and consumers.
   b) more by consumers than by producers.
   c) more by producers than by consumers.
   d) by the government, if the demand is perfectly price inelastic.
   e) entirely by producers.
Use the diagram below to answer Question 40.

40. Consider the market demand and supply curve for rice above. If the government introduces a tax on rice then:
   a) the quantity demanded decreases by 2,000 kilograms per week, and given that demand is perfectly price elastic at the new price, buyers will pay the entire tax of R5,000.
   b) the quantity demanded increases by 2,000 kilograms per week, and given that demand is perfectly price inelastic at the new price, sellers will pay the entire tax of R3,000.
   c) the quantity demanded decreases by 2,000 kilograms per week, and given that supply is perfectly price inelastic, sellers will pay the entire tax of R3,000.
   d) the quantity demanded decreases by 2,000 kilograms per week, and given that supply is perfectly price elastic, buyers will pay the entire tax of R3,000.
   e) the quantity demanded increases by 2,000 kilograms per week, and given that supply is perfectly price inelastic, sellers will pay the entire tax of R5,000.
41. Which of the following is correct about the theory of utility?
   a) A firm should stop increasing output as soon as diminishing marginal utility sets in.
   b) Utility varies across individuals and therefore cannot be used to determine consumer equilibrium.
   c) Consumers want to maximize their marginal utility.
   d) An additional unit of consumption may decrease marginal utility.
   e) As an individual's consumption of a good increases, total utility increases and marginal utility increases.

Tom has a monthly income of R380 that he uses to buy milk for R18 per litre and cheese for R72 per kilogram. Use this information to answer question 42 and 43 below.

42. The relative price of milk in terms of cheese is:
   a) ¼ kilograms of cheese per milk.
   b) 1 kilogram of cheese per milk.
   c) 2 kilograms of cheese per milk.
   d) 3 kilogram of cheese per milk.
   e) 4 kilogram of cheese per milk.

43. Which of the following statements is correct?
   a) His opportunity cost of consuming milk is 4 kilograms of cheese.
   b) His opportunity cost of consuming a kilogram of cheese is ¼ litre of milk.
   c) From the above information it can be determined that Tom derives more utility from consuming a litre of milk compared to a kilogram of cheese.
   d) From the above information it can be determined that Tom derives more utility from consuming a kilogram of cheese compared to a litre of milk.
   e) None of the above statements is correct.
Jay derives utility from consuming chocolates and ice creams as shown in the table below. Chocolates cost R2 each and ice creams cost R4 each. Use the table to answer questions 44 and 45 below.

<table>
<thead>
<tr>
<th>Quantity of chocolates</th>
<th>Total utility</th>
<th>Quantity of ice creams</th>
<th>Total utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
<td>3</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>28</td>
<td>4</td>
<td>56</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>5</td>
<td>60</td>
</tr>
</tbody>
</table>

44. Based on the table above, you can conclude that the:
   a) marginal utility of the sixth chocolate would be 31 utils.
   b) marginal utility of consuming a fourth ice cream is the same as the marginal utility of consuming a second chocolate.
   c) total utility of 3 ice creams is 16 utils plus 12 utils.
   d) total utility of 2 chocolates is 10 utils plus 18 utils.
   e) marginal utility of the first chocolate is zero utils.

45. If Jay's income is R18, he will consume:
   a) 5 chocolates and 2 ice creams.
   b) 3 chocolates and 3 ice creams.
   c) 1 chocolates and 4 ice creams.
   d) no chocolates and 4 1/2 ice creams.
   e) 5 chocolates and 5 ice creams.

46. The paradox of value between diamonds and water is explained by the fact that the

   a) total utility of water is less than the total utility of diamonds.
   b) total utility of diamonds exceeds the marginal utility of water.
   c) marginal utility of diamonds exceeds the total utility of water.
   d) marginal utility of water is less than the marginal utility of diamonds.
   e) the consumer surplus on diamonds is greater than the consumer surplus on water.
47. The best example of a variable resource in the short run is:
   a) a building.
   b) capital equipment.
   c) a contract to rent a piece of land.
   d) land.
   e) a labourer.

Use the diagram below to answer questions 48 and 49.

48. After what level of labour inputs do diminishing marginal returns first occur?
   a) 0.
   b) 60.
   c) 24.
   d) 30.
   e) 20.

49. Which of the following statements is correct:
   a) at an output level of 30, average product is 0.375.
   b) an output of 103 units is attainable.
   c) marginal product would be maximised at the 60th labourer.
   d) average product would be maximised between the 24th and 60th labourer.
   e) marginal product would be zero at the 30th labourer.
50. At the output level where marginal product is zero:
   a) the average product curve would lie below the marginal product curve.
   b) the marginal product curve would intersect the average product curve.
   c) the average product curve would lie above the total product curve.
   d) the average product curve would intersect the horizontal axis and the marginal product curve would be falling.
   e) the marginal product curve would intersect the horizontal axis and the average product curve would be falling.

51. Consider the following statements:

   i. Economic profit is total revenue minus the cost of using resources bought in the market and the cost of resources owned by the firm only.
   ii. Calculating economic profit makes it possible to predict the firm’s decision to enter or exit the industry.
   iii. When calculating accounting profit it is necessary to include the cost of using resources supplied by the firm’s owner.

Which of the above statements is correct:
   a) i only.
   b) i and ii only.
   c) ii only.
   d) ii and iii only.
   e) i, ii and iii.

52. In economics, the cost of production differ from those in accounting in that:
   a) economics adds the opportunity cost of a firm using its own resources.
   b) accounting includes expenditures for hired resources while economics does not.
   c) accounting costs are always larger than economic costs.
   d) economics includes expenditures for hired resources while accounting does not.
   e) none of the above.

53. A company could produce 49 units of a good for R31,600 or produce 50 units of the same good for R32,400. The marginal cost of the 50th unit is:
   a) R400.
   b) R800.
   c) R1000.
   d) R32,400.
   e) R600.
Use the table below to answer questions 54 and 55.

<table>
<thead>
<tr>
<th>Output (apples)</th>
<th>Total variable costs (Rands)</th>
<th>Total cost (Rands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>180</td>
<td>220</td>
</tr>
<tr>
<td>40</td>
<td>280</td>
<td></td>
</tr>
</tbody>
</table>

54. The above (incomplete) table gives some of the costs of the Apple Company. What is the total fixed cost of producing 20 apples?
   a) R40.
   b) R140.
   c) R220.
   d) R320.
   e) R0.

55. What is the average total cost when the firm produces 40 apples?
   a) 7.
   b) 8.
   c) 6.
   d) 10.
   e) 7.33.

56. The vertical distance between the total cost curve and the total fixed cost curve is:
   a) decreasing as output increases.
   b) increasing as output increases.
   c) equal to total fixed cost.
   d) equal to average fixed cost.
   e) equal to marginal cost.

57. Consider a business that produces T-shirts. The leased premises cost R6,000 per month. Materials together with wages for your employees cost R9,000 per month for an output level of 3,000 T-shirts, which are sold for R20 each. It follows that:
   a) average profit is R5 per T-shirt.
   b) average variable cost is R4 per T-shirt.
   c) average variable cost is R9 per T-shirt.
   d) average total cost is R5 per T-shirt.
   e) total variable cost is R15,000 per month.
58. Which of the following statements is correct?
a) The long-run ATC curve is often called the firm's minimum efficient curve.
b) The long-run ATC curve is often called the firm's production possibilities curve.
c) In the short-run all costs can vary.
d) In the long-run, if ATC rises as output rises then the firm is experiencing increasing returns to scale.
e) It can be said with certainty that the long-run is the period of time after the firm has been producing for one year.

59. Which of the following is FALSE?
a) Long-run average variable costs equal long-run average total costs.
b) There are only variable costs in the long run.
c) Generally, as a firm produces more output in the long run it eventually experiences diseconomies of scale.
d) In the long run, both the amount of capital and labour used by the firm can be changed.
e) The long-run average cost curve is composed of short-run marginal cost minimums.
60. From the diagram above, which of the following statements is correct?
   a) Increasing returns to scale occur after an output level of $Q_3$.
   b) Increasing returns to scale occur before an output level of $Q_2$.
   c) Decreasing returns to scale occur after an output level of $Q_3$.
   d) Constant returns to scale occur after an output level of $Q_3$.
   e) Decreasing returns to scale occur before an output level of $Q_2$.

61. Which one of the following statements is true for a perfectly competitive industry?
   a) Two firms sell identical products to many buyers.
   b) Firms may require a license to gain entry into the industry.
   c) Established firms have an advantage over new firms.
   d) Sellers and buyers are well informed about prices.
   e) Firms are price setters.

62. In perfect competition, the slope of the total revenue curve of an individual firm:
   a) at first increases at an increasing rate, and then increases at a decreasing rate.
   b) is perfectly elastic
   c) is perfectly inelastic.
   d) increases at an increasing rate.
   e) increases at a constant rate.
The diagram below shows the marginal revenue, marginal cost and average total cost curves facing a perfectly competitive firm. The firm's total costs consist of variable plus fixed costs. Use the diagram to answer questions 63, 64, 65, 66 and 67.

63. In the short-run, the firm will produce ______ units of output to maximise profit and will make an economic profit equal to ______.
   a) 20 units; zero
   b) 22 units; R88
   c) 22 units; zero
   d) 20 units; R100
   e) 20 units; R20

64. In the short-run, the firm’s total cost will be:
   a) 352.
   b) 440.
   c) 300.
   d) 20.
   e) 15.
65. In the short run, the firm's supply curve will start at point:
   a) A. 
   b) B. 
   c) C. 
   d) E. 
   e) None of the above.

66. In the long run, the firm will produce_____ units of output to maximise profit and will make an economic profit equal to ________.
   a) 20 units; R100 
   b) 22 units; zero 
   c) 20 units; zero 
   d) 22 units; R88 
   e) The firm will shutdown and make zero economic profit.

67. In the short run equilibrium:
   a) the firm's average fixed cost is represented by BC. 
   b) the firm's average variable cost is represented by AC. 
   c) the firm's average variable cost curve and average total cost curve are identical. 
   d) the firm's average revenue curve is represented by EF. 
   e) the firm's average fixed cost curve and average total cost curve are identical.

68. Which of the following statements regarding a monopoly is correct?
   a) When the firm drops its price to sell an additional unit, the firm's marginal revenue is equal to the new price. 
   b) In the case of a natural monopoly, economies of scale exist over the entire range of output. 
   c) An example of a legal barrier to entry is when a firm owns a significant portion of a key factor of production. 
   d) Price discrimination is when a firm is experiencing different unit costs but is still charging the same price per unit. 
   e) All of the above statements are correct.
The table below shows output of a monopoly. Use the table below to answer questions 69, 70 and 71.

<table>
<thead>
<tr>
<th>Price</th>
<th>Output</th>
<th>Marginal revenue</th>
<th>Total costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>0</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>54</td>
<td>1</td>
<td>54</td>
<td>56</td>
</tr>
<tr>
<td>48</td>
<td>2</td>
<td>42</td>
<td>66</td>
</tr>
<tr>
<td>42</td>
<td>3</td>
<td>30</td>
<td>80</td>
</tr>
<tr>
<td>36</td>
<td>4</td>
<td>18</td>
<td>98</td>
</tr>
<tr>
<td>30</td>
<td>5</td>
<td>6</td>
<td>120</td>
</tr>
<tr>
<td>24</td>
<td>6</td>
<td>-6</td>
<td>146</td>
</tr>
</tbody>
</table>

69. For a single price monopoly, how many units of output will be produced?
   a) 0.
   b) 2.
   c) 3.
   d) 4.
   e) 5.

70. How much economic profit does the monopoly earn?
   a) R18.
   b) R46.
   c) R26.
   d) R112.
   e) R144.

71. Consumer surplus will be:
   a) R60.
   b) R36.
   c) R48.
   d) R0.
   e) R144.

72. If this monopolist was replaced by a perfectly competitive market then:
   a) consumer surplus would decrease.
   b) producer surplus would increase.
   c) total output would decrease.
   d) the price would increase.
   e) the deadweight loss would decrease.
73. Which of the following are common to both oligopoly and monopolistic competition?
   a) The existence of barriers to entry.
   b) Normal profit in the long run.
   c) Product differentiation and brand loyalty by customers.
   d) Producing at minimum efficient scale in the long run.
   e) Perfectly inelastic demand curve.

The diagram below shows the demand and cost curves of a monopolistically competitive firm. Use the diagram below to answer questions 74, 75, 76 and 77.

74. Consider the following statements:
   i. The diagram above shows the long run equilibrium position of the firm.
   ii. Firms will continue to enter the above market until economic profits are driven to zero.
   iii. The firm has excess capacity.

Which of the above statements is correct:
   a) i and ii only.
   b) i and iii only.
   c) ii and iii only.
   d) i only.
   e) i, ii and iii.
75. The firm’s total cost is:
   a) 7,500.
   b) 18,750.
   c) 11,250.
   d) Zero.
   e) 250.

76. Which of the following statements is correct?
   a) The firm’s markup is 250 per unit.
   b) The firm earns a profit of 11,250.
   c) The firm produces at a level of output that is greater than the efficient scale.
   d) The firm’s average revenue is equal to its average total cost.
   e) None of the above statements is correct.

77. Compared to a perfectly competitive firm with the same costs, the monopolistically competitive firm:
   a) produces more.
   b) charges a lower price.
   c) faces a steeper demand curve.
   d) produces at a lower average total cost.
   e) earns a higher profit.

78. A clothing manufacturer operating in a monopolistically competitive market develops a range of clothing that never creases. Consumer demand for the clothing increases relative to the clothing of its competitors in the short run. Consequently, in the long-run:
   a) rival firms will leave the market and the manufacturer will make an economic profit.
   b) the manufacturer will make a normal profit due to the barriers to entry that exist in the market.
   c) rival firms will enter the market and all firms will make an economic profit due to this new technology that exists.
   d) the manufacturer that discovered the new range of clothing will make an economic profit whilst rival firms will make a normal profit.
   e) the manufacturer will still face rivalry in the market so will earn a normal profit.

79. An oligopoly faces a kinked demand curve if:
   a) each firm believes that if it raises its price, other firms will not follow.
   b) each firm believes that if it cuts its price, other firms will not follow.
   c) each firm believes that if it raises its price, other firms will also raise their price.
   d) each firm believes that it can earn a normal profit in the long run.
   e) each firm believes that it will only ever make an economic loss.
80. Which of the following is a feature of oligopoly?
   a) Only one firm in the market.
   b) Rivals that produce differentiated products.
   c) Inability to earn economic profit in the long run.
   d) Setting price equal to marginal cost.
   e) No barriers to entry.