FINAL **%**

MICROECONOMICS 2601

100 Marks   **2 Hours**

FI Concession Assessment 27 February 2017

STUDENT NUMBER

IDENTITY NUMBER

Question No	Marks		
	Examiners		
	1	2	
Section A			
Section B			
Total: A + B			

February 2017: FI Assessment test for ECS2601

Print the assessment, complete all the questions scan it and send it back by e-mail.

The duration of the test is 2 hours. The remaining hour is to allow you adequate time to access the test and return it, regardless of load shedding or other unexpected occurrences. All tests that have not been received back by 13:00 am South African time on 27 February 2017 will not be marked. No exceptions will be made.

Please see below the declaration that you have to complete to certify that the completed test that you submit is your own work. You are allowed to use all your study material to complete the test but it must be your own work – you are not allowed to ask any other person to help you to complete the test. You should arrange for all your study material to be available on the date that you need to complete the test. You are not allowed to use other sources, except for the prescribed study material and your own notes and summaries to complete the assessment. You are not allowed to contact your lecturer to ask questions about the test while it is in progress. If you think that there is a problem with a question in the test, you should indicate this problem in writing on the test.

DEPARTMENT OF ECONOMICS
ECS2601: FI ASSESSMENT OPPORTUNITY DECLARATION BY STUDENT

Full names: ……………………………………………………………………………

Student no: …………………………………………………………………………

Telephone number: ………………………………………………………………….

E-mail: ………………………………………………………………………………….

Date of submission: ……………………………………………………………………

I declare that the work I am submitting for assessment is my own work and that I received no help from any other person to complete the assessment. I declare that I did not use any other sources except for the prescribed study material and my own notes to complete this assessment. …………………………………….. ***(Signature)***

ID number: …………………………………………………

Signed on ……………………….. (date) at ....…………………..(place).

This assessment consists of 19 pages and two (2) sections: A and B

Both sections are **COMPULSORY.**

Answer **Section A** in the space provided below every question and **Section B** in the table provided below the questions.

SECTION A (55 marks)

SECTION B (45 marks)

SECTION A

Questions 1 to 5 of the assessment paper are **PRACTICAL** questions.

Please answer **ALL** five questions. **Section A** counts 55 marks out of a total of 100.

Please answer the questions by showing all the steps.

QUESTION 1 (10 marks)

Calculate the price elasticity of supply (using the midpoint formula) for each of these three supply curves for the price changes as indicated in the table below (one answer is already provided).

Price changes	$Q_S = 200 + 5P$	$Q_S = 5P$	$Q_S = -200 + 5P$
From 50 to 60			
From 60 to 70			
From 70 to 80			
From 80 to 90			
From 90 to 100			
From 300 to 310			

QUESTION 2 (10 marks)

2.1 Thabo is very picky and insists that his mom make his breakfast with equal parts of cereal and apple juice. Cereal costs 40 cents per tablespoon and apple juice costs 60 cents per tablespoon. If Thabo's mom budgets R80 per month for Thabo's breakfast, how much cereal and juice does Thabo's mom buy to satisfy Thabo's taste? (4)
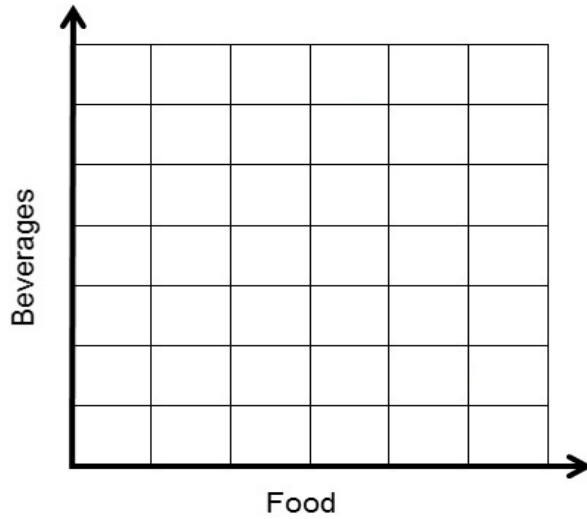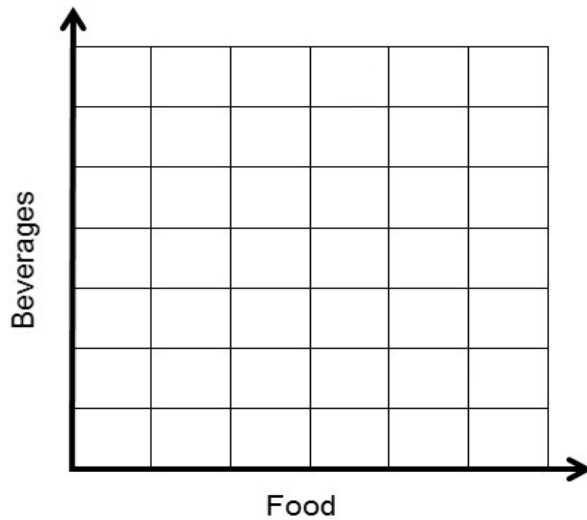
2.2   Pete has a budget of R600. The price of food is R75 and the price of beverages is R50.

2.2.1   Draw a budget line, with food on the horizontal axis.   (2)

2.2.2   Suppose an indifference map exists, show Pete's equilibrium point on the diagram below.   (2)

2.2.3   Which conditions must be satisfied to gain equilibrium?   (2)

_____

_____

_____

_____

QUESTION 3 (10 marks)

Consider the following table:

Q	Total Revenue (TR)	Total Cost (TC)	Total Profit	Average Revenue (AR)	Average Total Cost (ATC)	Marginal Revenue (MR)	Marginal Cost (MC)
0	0	50					
1	300	300					
2	575	525					
3	825	725					
4	1 050	900					
5	1 250	1 050					
6	1 425	1 225					
7	1 575	1 425					
8	1 700	1 650					
9	1 800	1 900					
10	1 875	2 175					

3.1 Complete the table above. (8)

3.2 Based on this information, how do you know that this firm is not operating in a perfectly competitive market?

(2)

_____

_____

_____

_____

_____

QUESTION 4 (20 marks)

Consider the following table which shows the cost structure of a firm:

Units	Total Fixed Cost (TFC)	Total Variable Cost (TVC)	Total Cost (TC)	Average Total Cost (ATC)	Average Variable Cost (AVC)	Marginal Cost (MC)
0			20	-	-	
1		10				
						6
2						
3		24				
4				13.5		
5			66			
						14
6						
7		76				
8			114			

4.1   Complete the table.   (5)

4.2   Use the set of axes below to complete the ATC, AVC and MC curves on the same set of axes. Ensure that you plot the MC values halfway between the whole values. For example, you would plot the MC value for the first unit halfway between 0 and 1.   (5)
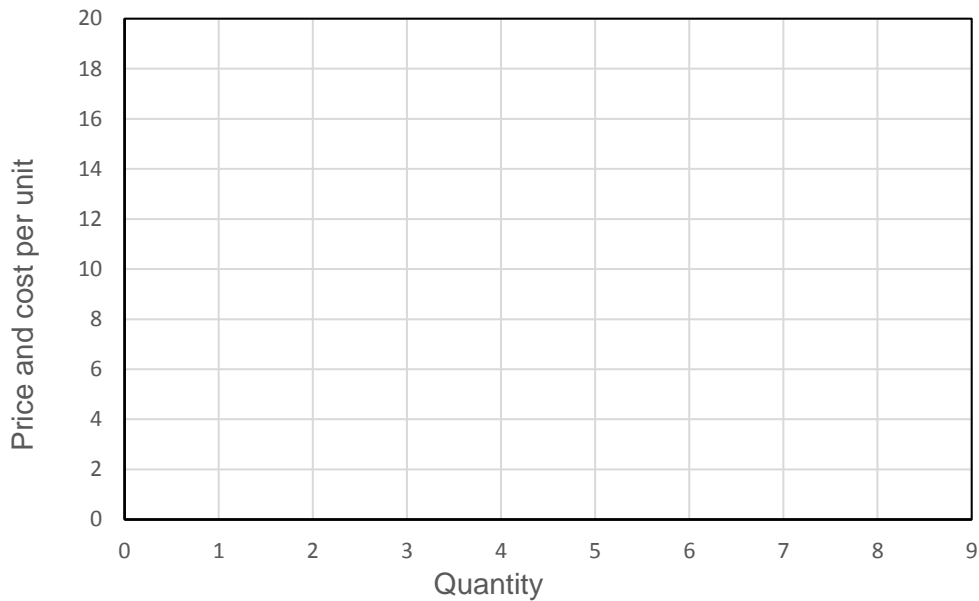

4.3   If the market price were R16 per unit, draw the corresponding demand, AR and MR curves along with the MC and ATC curves. Then indicate the equilibrium quantity that this firm would produce, as well as the total profit that the firm makes. From the table, also calculate the total profit.   (5)
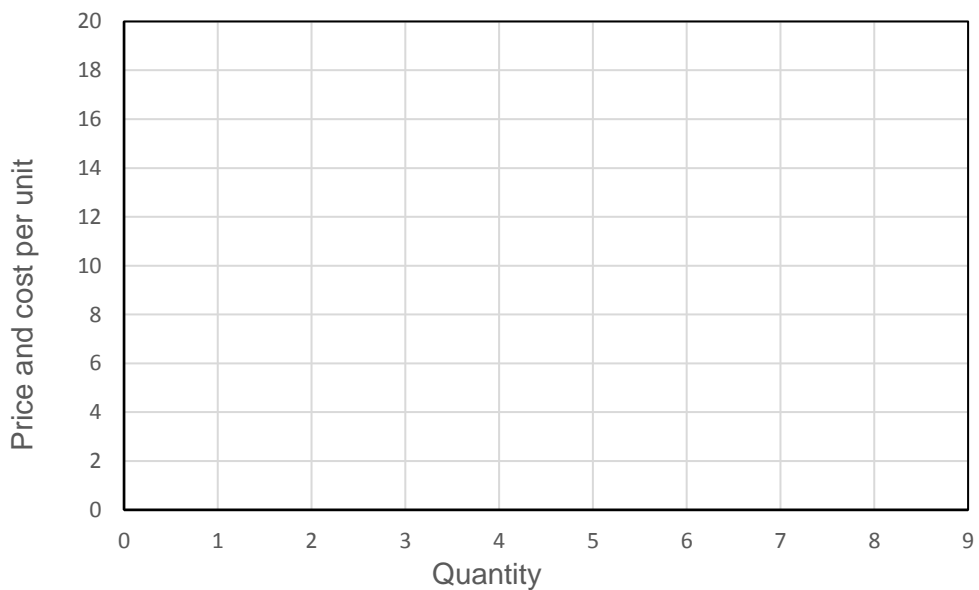
4.4 What would happen if the market price decreases to R12 per unit?

Again, indicate the corresponding demand, AR and MR curves on the same diagram. Then indicate the equilibrium quantity that this firm would produce, as well as the total loss that the firm makes. Why does the firm continue producing in the short run? (5)
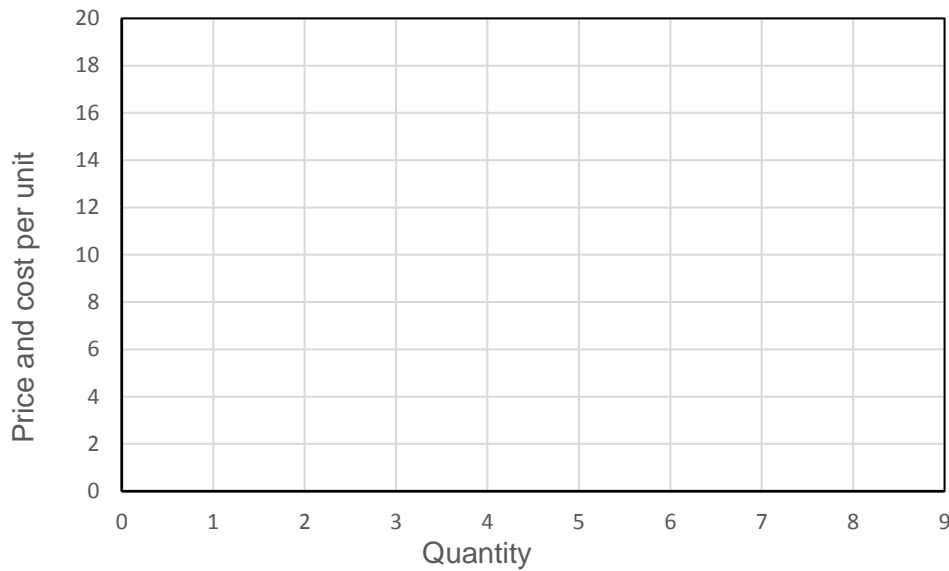
QUESTION 5 (5 marks)

Two firms operating in the same market must choose between a collusion price and a cut price. Firm A's profit is listed before the comma, and B's outcome after the comma. If each firm tries to choose a price that is best for it, regardless of the other firm's price, which actions would firm A and firm B choose?

	Firm B cuts	Firm B colludes
Firm A cuts	6,6	24,0
Firm A colludes	0,24	12,12

ROUGH WORK / ROFWERK

SECTION B

Section B of the assessment paper comprises 30 MULTIPLE CHOICE QUESTIONS. All the questions must be answered in the table provided. Also pay attention to the following:

(i)   Only one of the alternatives per question is correct.

(ii)   For a correct answer you will receive **one and a half mark**. No marks will be deducted for incorrect answers.

(iii)   **Section B** consists of 30 questions and counts 45 marks out of a grand total of 100 marks.

1.   The income effect of a price decrease …

   1.   refers to the influence of real income changes rather than nominal income changes on consumer purchases.
   2.   refers to the influence of nominal income changes rather than real income changes on consumer purchases.
   3.   measures the effect of both real and nominal income changes on consumer purchases.
   4.   does not relate to changes in real or nominal income, but rather to the perception of change in the mind of the consumer.

2.   If two perfect complements, a keyboard and a computer, are being considered and the price of the keyboard only is increased, then the substitution effect of the price change will …

   1.   be negative because keyboards are inferior goods.
   2.   be positive because the consumer feels poorer.
   3.   be 0 because it is impractical to have more keyboards and fewer computers.
   4.   be negative because keyboards and computers are perfect substitutes.

3.   Suppose that there are two consumers in the market for shoes. Both consumers have linear demand curves with different slopes but the same vertical intercept. Assuming that shoes are an ordinary good, the market demand curve …

   1.   will have a kink and be steeper to the left of the kink than to the right of the kink.
   2.   will have a kink and be steeper to the right of the kink than to the left of the kink.
   3.   will be a straight line without a kink.
   4.   none of the above.

4. Coffee and croissants are the only two goods that Melanie buys and both of them always have positive marginal utilities. If croissants are a luxury good, then we can say for certain that …

    1. coffee is an inferior good.
    2. coffee is a normal good.
    3. the income elasticity of demand for coffee is less than zero.
    4. the income elasticity of demand for coffee is less than one.

5. In which of the following cases would the income and substitution effects for books have the same sign?

    1. When books are a normal, ordinary good and the price of books increases.
    2. When books are an inferior, ordinary good and the price of books increases.
    3. When books are a Giffen good and the price of books increases.
    4. None of the above.

6. Suppose the price of pasta increases and you view pasta as an inferior good. The substitution effect results in a _____ change in pasta consumption, and the income effect leads to a_____ change in pasta consumption.

    1. positive, positive
    2. positive, negative
    3. negative, positive
    4. negative, negative

7. In the short run, the number of machines a firm uses is fixed at 100 but the firm can vary the number of workers it employs. The short run costs of producing 500 units of output will be …

    1. greater than the long run costs of producing 500 units of output.
    2. less than the long run costs of producing 500 units of output.
    3. equal to the long run costs of producing 500 units of output.
    4. (1) or (2) could be true.

8. Suppose that supply is perfectly elastic and the demand curve is downward sloping. A quantity tax placed on consumers will …

    1.   increase consumer surplus.

    2.   decrease the price received by producers.

    3.   decrease consumer surplus.

    4.   decrease producer surplus.

9. The long-run price elasticity of demand for a good tends to be …

    1.   positive, while the short-run elasticity is negative.

    2.   smaller (in absolute value) than the short-run price elasticity.

    3.   larger (in absolute value) than the short-run price elasticity.

    4.   negative, while the long-run elasticity is positive.

10. The income-consumption curve for John between Q_a and Q_b is given as: $Q_a = Q_b$. His budget constraint is given as: $120 = Q_a + 4Q_b$. How much Q_a will Johan consume to maximize utility?

    1.   0

    2.   24

    3.   30

    4.   60

11. A Giffen good …

    1.   is always the same as an inferior good.

    2.   is the special subset of inferior goods in which the substitution effect dominates the income effect.

    3.   is the special subset of inferior goods in which the income effect dominates the substitution effect.

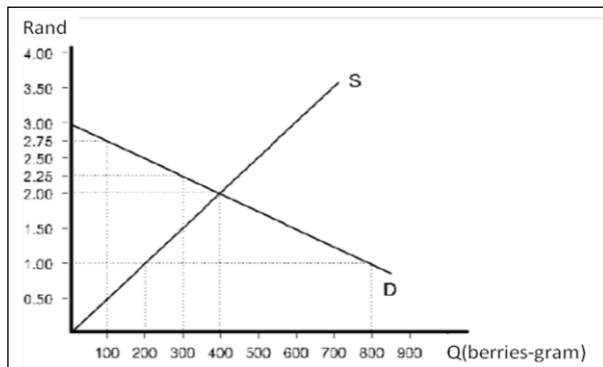   4.   must have a downward sloping demand curve.

Use Figure 1 to answer question 12.

12. How much profit will the monopolist whose cost and demand curves are shown in Figure 1 earn at output Q1?

    1. 0CDQ1
    2. 0BEQ1
    3. 0AFQ1
    4. ACDF

Figure 1
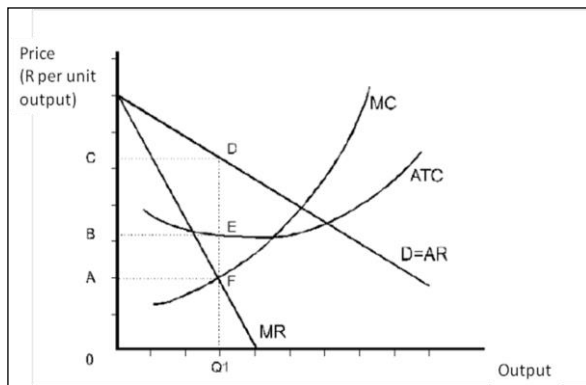
Use Figure 2 to answer questions 13 and 14.

13. If the market is in equilibrium, total consumer and producer surplus is …

    1. R4.
    2. R5.
    3. R600.
    4. R800.

14. If the government establishes a price ceiling of R1.00, the resulting deadweight loss will be …

    1. R1.50.
    2. R200.
    3. R150.
    4. R300.

15. The difference between what a consumer is willing to pay for a unit of a good and what must be paid when actually buying it is called …

    1. producer surplus.
    2. consumer surplus.
    3. cost benefit analysis.
    4. net utility.

16. When the income-consumption curve has a positive slope throughout its entire length, we can conclude that …

    1. both goods are inferior.
    2. both goods are normal.
    3. the good on the vertical (y) axis is inferior.
    4. the good on the horizontal (x) axis is inferior.

17. Tim receives the following marginal utilities from his first five classes of the semester: 100, 80, 60, 40, and 30. What is the total utility of his three favourite classes?

    1. 60
    2. 80
    3. 200
    4. 240

18. Emma expresses grief that she receives less additional utility from each additional Apple MacBook (laptop). Being an economist, she estimates that the total utility she receives from one, two, and three MacBooks are 15 000, 27 000, and 36 000, respectively. If the price of a MacBook is R15 000, then what is the marginal utility for every rand spent on the second MacBook?

    1.   1.8
    2.   0.8
    3.   27 000
    4.   12 000

19. If a person could increase total utility by purchasing more chocolates and fewer apples, then the

    1.   total utility of chocolates must exceed the total utility of apples.
    2.   marginal utility of chocolates must exceed the marginal utility of apples.
    3.   marginal utility per rand spent on chocolates must exceed the marginal utility per rand spent on apples
    4.   total utility per rand spent on chocolate must exceed the total utility per rand spent on apples.

20. The income effect of a lower price for good A …

    1.   invariably leads a consumer to buy more of good A, because the combination of unchanged money income and lower price raises that consumer's real income or purchasing power.
    2.   invariably leads a consumer to buy less of good A because the combination of unchanged money income and lower price encourages that consumer to buy more of other goods.
    3.   may lead to a larger, smaller, or even an unchanged quantity of good A demanded; it all depends on the nature of the good itself.
    4.   creates a change in the good's relative price and, therefore, causes the consumer to substitute good A in place of other goods.

21. At a firm's current output level of 200 units per week, it has 10 employees at a weekly wage of R500 each. Raw materials, which are ordered and delivered daily, cost R1 000 per week. The weekly cost of the firm's capital is R1 250. Which of the following statements is **CORRECT**?

    1.   Total variable cost is R5 000; total fixed cost is R2 250; total cost is R7 250.
    2.   Total variable cost is R6 000; total fixed cost is R1 250; total cost is R7 250.
    3.   Total variable cost is R1 250; total fixed cost is R6 000; total cost is R7 250.
    4.   Total variable cost is R2 250; total fixed cost is R500; total cost is R2 750.

22. Which of the following is true about the relationships among various cost curves?

  1. When MC exceeds ATC, ATC must be rising.
  2. When MC exceeds ATC, ATC could be rising or falling.
  3. When ATC is falling, MC must exceed ATC.
  4. When TC is rising, MC must exceed TC.

23. Average variable cost (AVC) begins rising before average total cost (ATC) because …

  1. AVC is not influenced by declining average fixed cost.
  2. AVC is not influenced by marginal cost.
  3. ATC is not influenced by rising marginal cost.
  4. AVC is not influenced by diminishing returns.

24. If an entrepreneur is minimizing cost for a given output level and the marginal product of labour is 5, the marginal product of capital is 15, and the price of capital is R300, then the price of labour ...

  1. must be R900.
  2. must be R400.
  3. must be R100.
  4. is not possible to determine from the information given.

25. The Bertrand model is a more plausible model of firm behavior than the Cournot model …

  1. when firms set the quantity to be sold.
  2. when firms sell a differentiated product.
  3. because firms that sell a non-differentiated product typically act as price takers.
  4. because the Bertrand model predicts that firms will price at marginal cost.

26. In the Stackelberg model, the leader has a first-mover advantage because it …

  1. has lower costs than the follower.
  2. commits to producing a larger quantity.
  3. reacts to the follower's decision.
  4. differentiates its output.

27. Which of the following models results in the highest level of output assuming a fixed number of firms with identical costs and a given demand curve?

    1. Cournot
    2. Stackelberg
    3. Monopoly
    4. Cartel

28. If marginal revenue is shown by the equation MR = 100 – 10Q, what is the corresponding demand curve equation?

    1. P = 100 – 5Q
    2. P = 50 -10Q
    3. P = 100 – 20Q
    4. P = 50 – 5Q

29. In a Cournot duopoly model, one characteristic of the equilibrium position is that …

    1. both firms produce the same amount of output.
    2. one firm drives the other out of the market.
    3. the output is less that the single-price monopoly output would be if only one firm were in the market.
    4. output is the same as would exist in a competitive market.

30. A weakness of the Stackelberg model is that …

    1. both firms behave naively rather than strategically.
    2. both firms behave strategically.
    3. one firm behaves strategically while the other behaves naively.
    4. there are no assumptions about how the firms will react to each other.

You must write down your answers for Section B in the space provided below.		
1.	11.	21.
2.	12.	22.
3.	13.	23.
4.	14.	24.
5.	15.	25.
6.	16.	26.
7.	17.	27.
8.	18.	28.
9.	19.	29.
10.	20.	30.