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UNISA university of south africa

ECS2601

OCTOBER/NOVEMBER 2016

MICROECONOMICS

STUDENT NUMBER									

IDENTITY NUMBER												

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Section	Marks Examiners'					
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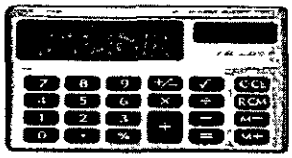

UNIVERSITEITSEKSAMENS

UNISA university of south africa

ECS2601 (470290) October/November 2016

MICROECONOMICS

Duration 2 Hours 100 Marks

EXAMINERS :
FIRST MS SY HO
SECOND MS A BREYTENBACH

Use of a non-programmable pocket calculator is permissible

Closed book examination.

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This paper consists of 17 pages, instructions for the completion of a mark-reading sheet and a special front page

STUDENT NUMBER									

VERY IMPORTANT

The unique number for ECS2601 is 470290

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SECTION A

Candidates must answer QUESTION 1 and then **EITHER** QUESTION 2 **OR** QUESTION 3 If you answer more than two questions, only the first **TWO** questions will be marked All questions carry equal marks, namely 20 marks per question Section A therefore counts 40 marks out of a total of 100

QUESTION 1 (20 marks)

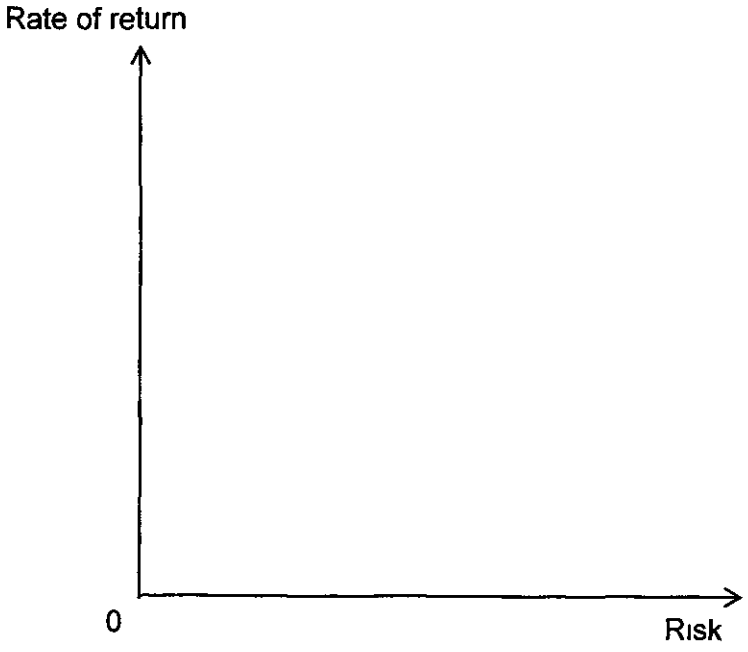
1 (a) Consider the following baskets of goods

	FOOD	CLOTHING
A	8	5
B	4	5
C	5	8

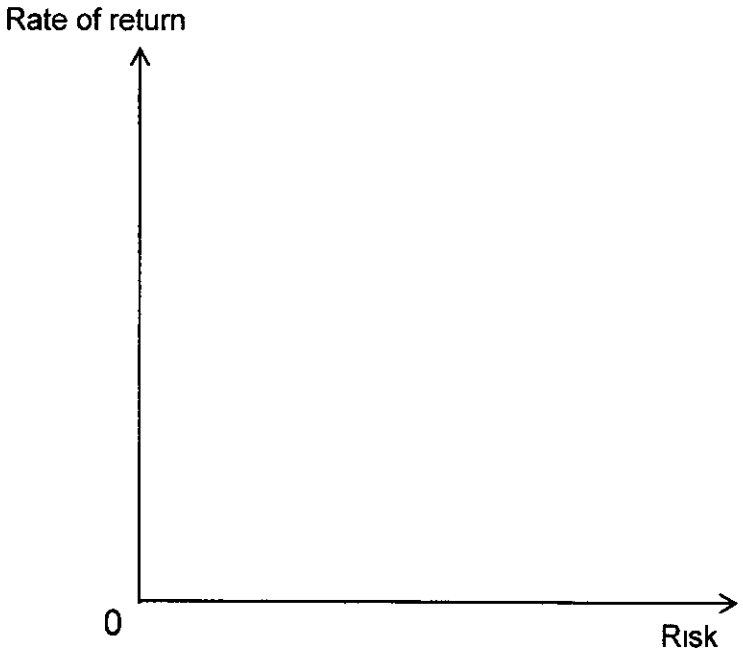
If preferences satisfy all assumptions, is A preferred to C or C to A? Explain your answer (3)

(b) In the field of financial management, it has been observed that there is a trade-off between the rate of return that one earns on investments and the amount of risk that one must bear to earn that return

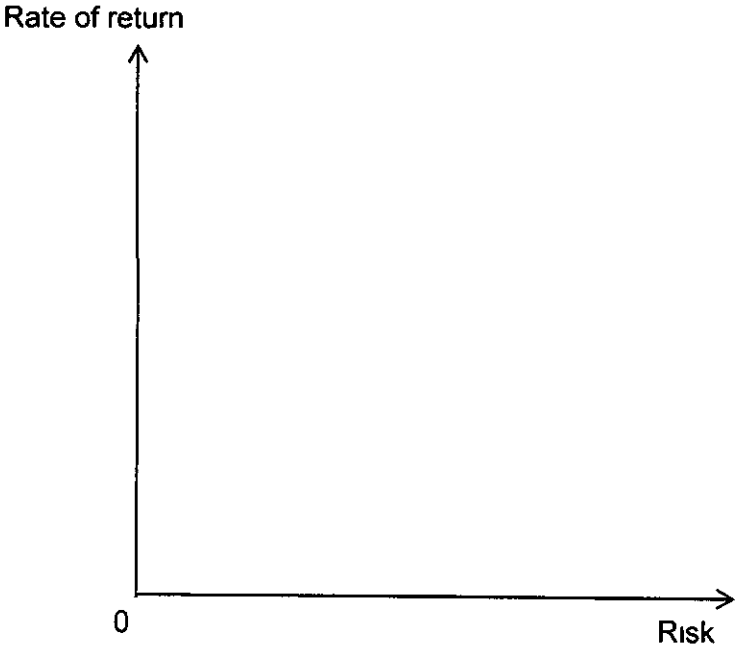
(i) Draw a set of indifference curves of risk and return for a person that is risk averse (a person that does not like risk) (2)



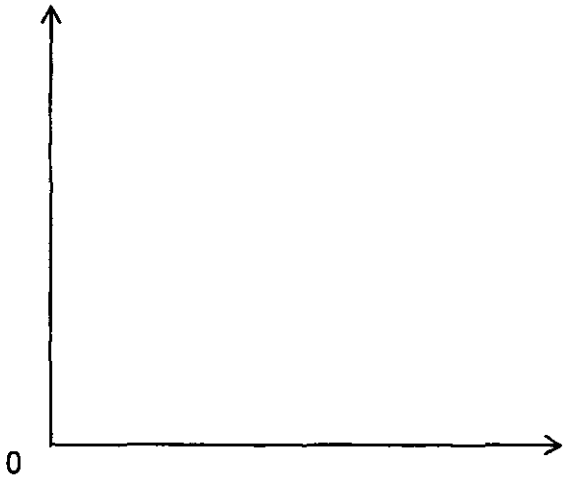
(ii) Draw a set of indifference curves for a person that is risk neutral (a person that does not care about risk one way or the other) (2)



(iii) Draw a set of indifference curves for a person that likes risk (2)



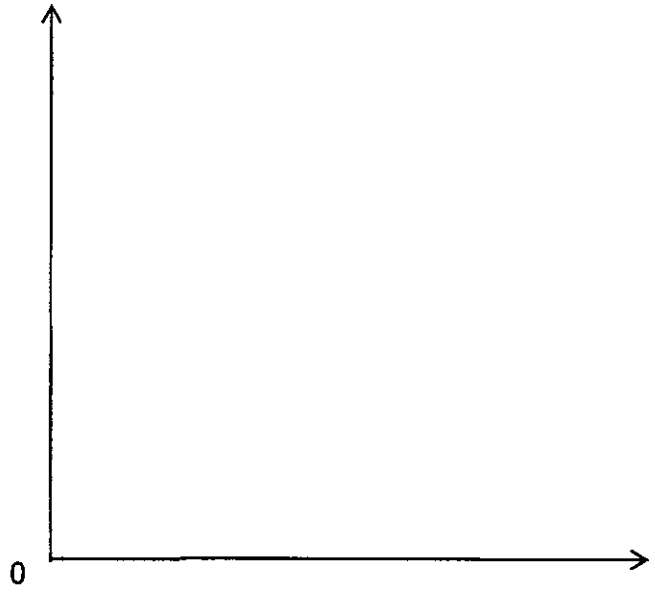
(c) (i) Thembi has a budget of R1 400 The price of food is R200 and the price of clothes is R100 She maximises her utility by buying 4 units of food and 6 units of clothes Draw a budget line, with food on the horizontal axis (2)



(ii) Suppose an indifference map exists, show Thembi's equilibrium point on the diagram above (2)

(iii) Which condition must be satisfied to gain equilibrium? (2)

(iv) When Thembi's income increases to R1 800, she can maximise her utility by buying 5 units of food and 8 units of clothes When her income increases to R2 600, she can buy 8 units of food and 10 units of clothes From the information given in (i) and (iii), draw an indifference curve map for Thembi, indicating all equilibrium positions, and derive her income consumption curve (5)



QUESTION 2 (20 marks)

2 (a) Italian Pizza currently pays R20 per hour for labour and R80 per hour to rent ovens and other kitchen machinery The restaurant uses seven hours of labour time per unit of machinery time

(i) Determine whether the restaurant is minimising its cost of production when the ratio of marginal products (capital to labour) is 5 (4)

(ii) If not, what adjustments are called for to improve the efficiency of resource use? (2)

(b) (i) The following table contains information for a perfectly competitive firm Complete the table (12)

Output	Total cost	Marginal cost	Fixed cost	Average cost	Total revenue	Average revenue	Marginal revenue
0			25			–	–
1	35						
2				30			
3		45					
4	185						
5				57			
6		120			150		

(ii) Determine the profit-maximising level of output (2)

QUESTION 3 (20 marks)

3 (a) In an unregulated, competitive market, we could calculate consumer surplus if we knew the equations representing supply and demand For this problem, assume that supply and demand are as follows

Supply P = 4 + 0 116Q
Demand P = 25 – 0 10Q,

where P represents unit price in rand and Q represents number of units sold each year

(i) What is the equilibrium price? Show your calculation and round up your result to two decimal places (4)

(ii) What is the equilibrium quantity? Show your calculation and round up your result to two decimal places (4)

(iii) Calculate the annual value of aggregate consumer surplus Show your calculation and round up your result to two decimal places (4)

(b) Two leading South African supermarkets must formulate their advertising strategies for the coming year Each firm has two strategies available maintain current advertising, or increase advertising by 15% The strategies available to the two firms, A and B, are presented in the payoff matrix below

	Firm B increases advertising	**Firm B maintains advertising**
Firm A increases advertising	15, 15	50, 12
Firm A maintains advertising	12, 50	25, 25

The entries in the individual cells are profits measured in millions of rand Firm A's outcome is listed before the semicolon (,) and firm B's outcome is listed after the semicolon (,)

(i) Which oligopoly model in the game theory is best suited for analysing this decision? (2)

(ii) If each firm tries to choose a strategy that is best for it, regardless of the other firm's strategy, which strategy would firm A and firm B choose? Support your choice by using the given firm's payoffs (6)

ROUGH WORK WILL NOT BE MARKED.

SECTION B

Answer **ALL** the questions in this section on the **mark-reading sheet** provided **Carefully follow the instructions for the completion of mark-reading sheets.** Pay attention to the following

(i) Suppose a question reads as follows

1 A simultaneous increase in supply and demand must result in

[1] a rise in price
[2] a drop in price
[3] an increase in quantity
[4] a change in the law of demand
[5] none of the above

The correct statement is [3] and you must therefore mark [3] on the **mark-reading sheet**

(ii) Only one alternative per question is correct Never mark more than one alternative for each question

(iii) You will receive **two marks** for each correct answer No marks will be deducted for incorrect answers

(iv) Section B consists of 30 questions and counts 60 marks out of a grand total of 100 marks

(v) **Place the completed mark-reading sheet in your examination book.**

Your mark-reading sheet may get lost and you MUST therefore write down your answers to the questions in this section on page 17 of your examination book, for example 1 [4]; 2 [3]; 3 [1], and so on.

SECTION B: MULTIPLE-CHOICE QUESTIONS

1 If the price elasticity of supply is zero, then

[1] the supply curve is horizontal
[2] a small drop in the price will result in suppliers producing nothing
[3] there is a shortage of the good on the market
[4] suppliers will still produce the same quantity when the price rises

2 If the price elasticity of supply of a product is 0 60 and the price rises by 3 per cent, then the quantity supplied of the product will increase by

[1] 0 60 per cent
[2] 0 20 per cent
[3] 1 8 per cent
[4] 18 per cent

3 The quantity of a good demanded increases from 2 000 to 2 500 units when the price falls from R180 to R120 per unit Using the arc elasticity of demand, the price elasticity of demand for this product is approximately

[1] –1 8
[2] –0 78
[3] –0 56
[4] –0 13

4 If a person could increase total utility by purchasing more dried fruit and fewer fresh apples, then the

[1] total utility of dried fruit must exceed the total utility of fresh apples
[2] marginal utility of dried fruit must exceed the total utility of fresh apples
[3] total utility per rand spent on dried fruit must exceed the total utility per rand spent on fresh apples
[4] marginal utility per rand spent on dried fruit must exceed the marginal utility per rand spent on fresh apples

5 Isoquants that are downward-sloping straight lines exhibit

[1] an increasing marginal rate of technical substitution
[2] a decreasing marginal rate of technical substitution
[3] a constant marginal rate of technical substitution
[4] a marginal rate of technical substitution that cannot be determined

6 Suppose a firm uses capital and labour only to produce output and the marginal products of capital and labour are both positive constants Which of the following is false?

[1] The firm's production technology exhibits increasing returns to scale
[2] The firm's production technology is monotonic
[3] The firm's technical rate of substitution is constant
[4] The firm's isocost lines are downward sloping

7 Themba 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

8 Sophia spends all of her income on potato chips and textbooks To maximise her total utility, she should

[1] allocate her income so that the marginal utilities of potato chips and textbooks are equal
[2] allocate her income so that the marginal utilities per rand spent on potato chips and textbooks are equal
[3] change her eating habits
[4] allocate her income so that the total utilities of potato chips and textbooks are equal

9 If two indifference curves intersected, this would suggest that

[1] consumers were inconsistent or irrational
[2] one of the goods must be inferior
[3] both goods must be inferior
[4] at least one of the goods must be normal

10 The slope of an indifference curve is

[1] equal to the ratio of the total utility of the goods
[2] equal to the ratio of the prices of the goods
[3] called the marginal rate of substitution (MRS)
[4] all of the above

11 If a consumer in Uganda is always indifferent about one additional unit of cassava or two additional units of coffee (coffee is on the horizontal axis), then the indifference curves

[1] will be straight lines with a slope of $-\frac{1}{2}$
[2] will be straight lines with a slope of -1
[3] will be straight lines with a slope of $\frac{1}{2}$
[4] will be right angles whose corners occur on a ray from the origin, with a slope of 2

12 An increase in men's wages will most likely

[1] cause an increase in labour force participation by married women due to the substitution effect
[2] cause a decrease in labour force participation by married women due to the income effect
[3] cause no effect on the labour force participation by married women, although the substitution effect will increase the participation of married men
[4] cause an increase in labour force participation by married men, due to the income effect

13 Which of the following formulas is not correct?

[1] ATC = AVC + (TFC / Q)
[2] TVC = TC / Q
[3] TC = TFC + TVC
[4] AFC = TFC / Q

14 Average productivity will decrease as long as

[1] marginal productivity is decreasing
[2] it is less than marginal productivity
[3] the number of workers is increasing
[4] it exceeds marginal productivity

15 A firm producing seven units of output has an average total cost of R150 and has to pay R350 to its fixed factors of production The average variable cost is

[1] R50
[2] R100
[3] R200
[4] R300

16 As a manager of the firm, you calculate that the marginal revenue is R100 and the marginal cost is R250 You should

[1] increase output
[2] do nothing since you do not have information about average fixed costs
[3] reduce output to where marginal revenue is equal to marginal costs
[4] increase output to where marginal revenue is equal to marginal costs
[5] maintain the current output

17 Which of the following is a key assumption of a perfectly competitive market?

[1] Firms can influence market price
[2] Commodities have few sellers
[3] It is difficult for new sellers to enter the market
[4] Each seller has a very small share of the market
[5] None of the above

18 When a firm charges each customer the maximum price that the customer is willing to pay, the firm

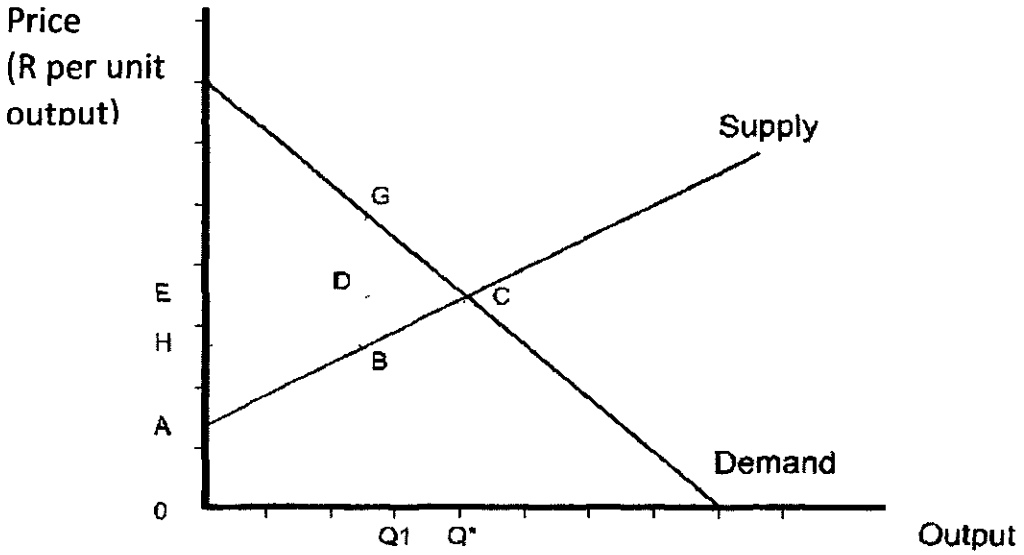
[1] engages in a discrete pricing strategy
[2] charges the average reservation price
[3] engages in second-degree price discrimination
[4] engages in first-degree price discrimination
[5] engages in a price war

19 Suppose Nomsa, Noleen and Nothando all purchase small whiteboard markers for their rooms for R1 500 each Nomsa is willing to pay R3 500, Noleen is willing to pay R2 500, and Nothando is willing to pay is R3 000 Total consumer surplus for the three of them would be

[1] R1 500
[2] R3 000
[3] R4 500
[4] R9 000

20 Refer to the graph in figure 1

Figure 1

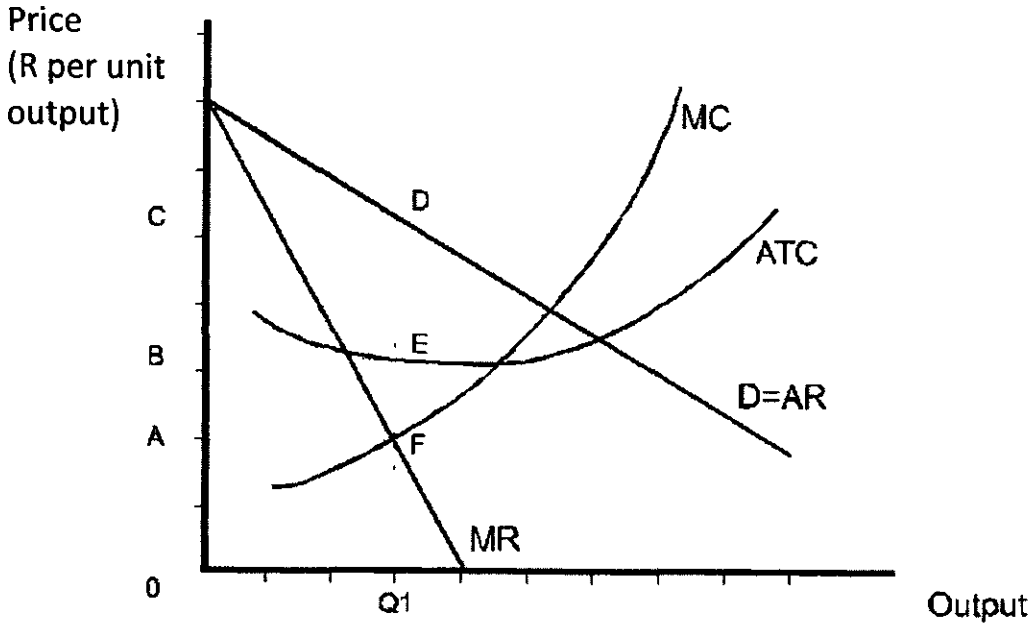


In figure 1 at price 0E and quantity Q*, the deadweight loss is

[1] 0ACQ*
[2] 0ECQ*
[3] 0FCQ*
[4] EFC
[5] none of the above

21 How much profit will the monopolist, whose cost and demand curves are shown in figure 2, earn at output Q1?

Figure 2



[1] 0CDQ1
[2] 0BEQ1
[3] 0AFQ1
[4] ACDF
[5] BCDE

22 A form of price discrimination, in which a seller charges different prices to groups that are differentiated by an easily identifiable characteristic such as location, age, sex, or ethnic group, is called

[1] first-degree price discrimination
[2] second-degree price discrimination
[3] third-degree price discrimination
[4] fourth-degree price discrimination
[5] price making

23 Although rice is a staple of the Japanese diet, the Japanese government has long restricted the importation of rice into Japan The aim of this import quota is to

[1] decrease the price of rice to the Japanese people
[2] decrease a consumer surplus of Japanese rice consumers
[3] decrease a producer surplus of Japanese rice producers
[4] secure a welfare gain for the Japanese people
[5] increase the consumption of rice by the Japanese people

24 Which of the following policies could lead to a deadweight loss?

[1] ceiling prices
[2] floor prices
[3] policies prohibiting free trade
[4] all of the above
[5] [1] and [2] only

25 If a regulatory agency sets a price, where AR = AC for a natural monopoly, output will be

[1] equal to the competitive level
[2] equal to the monopoly profit-maximising level
[3] greater than the monopoly profit-maximising level and smaller than the competitive level
[4] greater than the competitive level

26 Which oligopoly model has the same results as a perfectly competitive model?

[1] Cournot model
[2] Bertrand model
[3] Stackelberg model
[4] kinked demand model

27 A firm that has a kinked demand curve assumes that, if it raises its price, of its competitors will raise their prices and that, if it lowers its price, of its competitors will lower their prices

[1] all, all
[2] none, all
[3] all, none
[4] none, none

28 Which of the following is true?

[1] In a Bertrand oligopoly, each firm believes that its rivals will hold their output constant if it changes its output
[2] In a Cournot oligopoly, firms produce an identical product at a constant marginal cost and engage in price competition
[3] In an oligopoly, a change in marginal cost never has an effect on output or price
[4] None of the above

29 In the dominant firm model, the smaller fringe firms behave like

[1] competitive firms
[2] Cournot firms
[3] Stackelberg firms
[4] Bertrand firms
[5] monopolists

30 All of the following are ways monopolistically competitive firms differentiate their products, EXCEPT

[1] selling products with slightly different physical characteristics
[2] selling products at different locations
[3] offering different levels of service that come with a product
[4] creating a special aura or image for the product using advertising
[5] none of the above

Your mark-reading sheet may get lost, and you must therefore write down your answers to the questions in section B in the spaces 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

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EXAMINATION MARK READING SHEET **EKSAMEN-MERKLEESBLAD**

PART 1 (GENERAL/ALGEMEEN) DEEL 1

1 STUDY UNIT e.g. PSY100-X / STUDIE-EENHEID bv. PSY100-X

2 PAPER NUMBER / VRAESTELNOMMER

3 INITIALS AND SURNAME / VOORLETTERS EN VAN

4 DATE OF EXAMINATION / DATUM VAN EKSAMEN

5 EXAMINATION CENTRE (E G PRETORIA) / EKSAMENSENTRUM (BV PRETORIA)

6 STUDENT NUMBER / STUDENTENOMMER

7 c0 c1 c2 c3 c4 c5 c6 c7 c8 c9

8 UNIQUE PAPER NO / UNIEKE VRAESTEL NR

9 c0 c1 c2 c3 c4 c5 c6 c7 c8 c9

For use by examination invigilator

Vir gebruik deur eksamenopsiener

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1 USE ONLY AN HB PENCIL TO COMPLETE THIS SHEET
2 MARK LIKE THIS
3 CHECK THAT YOUR INITIALS AND SURNAME HAS BEEN FILLED IN CORRECTLY
4 ENTER YOUR STUDENT NUMBER FROM LEFT TO RIGHT
5 CHECK THAT YOUR STUDENT NUMBER HAS BEEN FILLED IN CORRECTLY
6 CHECK THAT THE UNIQUE NUMBER HAS BEEN FILLED IN CORRECTLY
7 CHECK THAT ONLY ONE ANSWER PER QUESTION HAS BEEN MARKED
8 DO NOT FOLD

BELANGRIK

1 GEBRUIK SLEGS N HB-POTLOOD OM HIERDIE BLAD TE VOLTOOI
2 MERK AS VOLG
3 KONTROLEER DAT U VOORLETTERS EN VAN REG INGEVUL IS
4 VUL U STUDENTENOMMER VAN LINKS NA REGS IN
5 KONTROLEER DAT U DIE KORREKTE STUDENTENOMMER VERSTREK HET
6 KONTROLEER DAT DIE UNIEKE NOMMER REG INGEVUL IS
7 MAAK SEKER DAT NET EEN ALTERNATIEF PER VRAAG GEMERK IS
8 MOENIE VOU NIE

PART 2 (ANSWERS/ANTWOORDE) DEEL 2

10

1	c1 c2 c3 c4 c5	36	c1 c2 c3 c4 c5	71	c1 c2 c3 c4 c5	106	c1 c2 c3 c4 c5
2	c1 c2 c3 c4 c5	37	c1 c2 c3 c4 c5	72	c1 c2 c3 c4 c5	107	c1 c2 c3 c4 c5
3	c1 c2 c3 c4 c5	38	c1 c2 c3 c4 c5	73	c1 c2 c3 c4 c5	108	c1 c2 c3 c4 c5
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35	c1 c2 c3 c4 c5	70	c1 c2 c3 c4 c5	105	c1 c2 c3 c4 c5	140	c1 c2 c3 c4 c5