SECTION A

Questions 1 to 5 of the examination question 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 (25 marks)

1 1 The average monthly income of households in a certain town increases from R2 000 to R2 500 As a result, the quantity demanded of white bread increases from 1 000 to 1 100 units per day, the quantity demanded of brown bread decreases from 2 000 to 1 900 units per day and the quantity demanded of KFC (friend chicken) increases from 300 to 500 pieces per day

1 1 1 Use the arc elasticity formula to calculate the income elasticity of demand for white bread, brown bread and KFC, respectively

Arc Income Elast = $\frac{\Delta Qd}{\Delta I} \cdot \frac{\left(\frac{I_1+I_2}{2}\right)}{\left(\frac{Q_1+Q_2}{2}\right)}$

White bread: $\frac{1000-1100}{2000-2500} = \frac{-100}{-500}\left(\frac{\frac{2500+2000}{2}}{\frac{1000+1100}{2}}\right) = 3/7$

brown: $\frac{2000-1900}{2000-2500}\left(\frac{\frac{2000+2500}{2}}{\frac{2000+1900}{2}}\right) = -3/13$

KFC: $\frac{300-500}{2000-2500}\left(\frac{(2500+2000)\div 2}{(300+500)\div 2}\right) = 9/4 = 2.25$

(9)

1 1 2 Classify each of these three products as normal or inferior Explain your answer in each case

White bread is $0 < e_i < 1$: Normal : Essential

Brown bread is $e_i < 0$: Inferior

KFC $e_i > 1$: Normal → Luxury

(3)

1 1 3 Classify each of these three products as a necessity or a luxury Explain your answer in each case

White bread – Essential (Necessity)

Brown bread – Neither, Inferior

KFC – Luxury

(3)

1 2 Assume that a firm hires 20 labourers at a rate of R60 per labourer per day The average product of the 20 labourers is three units per day and the last labourer adds one unit per day to the total product The fixed cost of production is R360

1 2 1 What is the total production of the 20 labourers?

$3 = \frac{TP}{20}$

$TP = 60$ units

(2)

1 2 2 What is the total cost of producing the output as calculated in question 1 2 1?

$TC = 360 + 1200$

$= R1560$

(2)

1 2 3 What is the average total cost if 60 units are produced?

$ATC = \frac{1560}{60} = R26$

(2)

$C = wL$
$= 60(20)$
$= 1200$

$TC = 360 + 1200$
$= 1560$

$3 = \frac{TP}{20}$
$\therefore TP = 60$

# of workers	TP	MP
19	57	
20	60	1