



Surname & names: _____

Student number: _____ Date: 27 June 2016

OPEN BOOK: Answer in spaces provided. You may do calculations on your own scrap paper.

PART D: Cost Management (US 119341).

Question 1: Activity Based Costing

10 marks

The Chief Financial Officer (CFO) of the XYZ municipality wants to implement Activity Based Costing (ABC) in the municipality. He has decided to implement it only in the Refuse Department at first. The CFO was able to provide you with the following overhead costs that are incurred in a normal month:

OVERHEAD COSTS (per month)	ADMINISTRATIVE	PART OF THE REMOVAL PROCESS
Employee-related expenses	R 800	R 2 500
Repairs & maintenance	R 900	R 14 000
Printing & stationery	R 300	R 700
Vehicle running costs	R 3 000	R 19 000
Consumables & small equipment	R 200	R 650

After some research, it was determined that the following activity measures apply to the Refuse Department's overhead costs:

OVERHEAD COSTS (per month)	ACTIVITY MEASURE	EXPECTED ACTIVITY (per month)
Employee-related expenses	Number of employees	230 employees
Repairs & maintenance	Kilometers travelled	12 000 km
Printing & stationery	Number of consumers	1 500 consumers
Vehicle running costs	Kilometers travelled	12 000 km
Consumables & small equipment	Number of consumers	1 500 consumers

1. Calculate activity rates for the different types of overhead costs that are incurred. Use the template below.

OVERHEAD COSTS (per month)	Activity Rate
Employee-related expenses	14.35
Repairs & maintenance	1.24
Printing & stationery	0.67
Vehicle running costs	1.83
Consumables & small equipment	0.57

Other information provided by the CFO: Each consumer makes use of **six** employees

2. Calculate the overhead cost for the municipality to serve the following consumer. Use the template below.

The cost of a consumer is influenced by the distance of the suburb from the municipal vehicle lot and the land-fill site. Total kilometers per month (ABC Construction): **25 km**

Costs per month (ABC Construction)	Costs
Employee-related expenses	86.1
Repairs & maintenance	31
Printing & stationery	0.67
Vehicle running costs	45.75
Consumables & small equipment	0.57
TOTAL COSTS	R164.09

Question 2: Variable Costing

10 marks

The ABC Municipality plans to deliver a new refuse removal service. The following revenue and cost relationships are expected:

Unit data	
Selling price (per service)	R 85
Variable costs (per service)	R 34
Fixed costs	R 550 000

- a) Calculate the margin of safety percentage if 40 000 services are sold and explain the meaning of the calculated margin of safety percentage. Use the space below.

CM% = 51/85 X 100 = 60%
BEP = 550 000/60% = R 916 666.70
MOS% = [(3 400 000 – 916 666.70)/3 400 000] X 100 = 73%
MOS% indicates revenue % above breakeven

b) Calculate the breakeven point (services) and the breakeven point (revenue) if a variable cost of R 5.50 is added to each service. Use the space below.

$$\text{CM\%} = 45.5/85 \times 100 = 53.5\%$$

$$\text{BEP (services)} = 550\,000/45.50 = 12\,087.91$$

$$\text{BEP(revenue)} = 550\,000/53.5\% = \text{R } 1\,028\,037$$