

MANAGEMENT ACCOUNTING (MBAB823)

MEMORANDUM 1st PAPER - NOVEMBER 2018 – TOTAL 100

Question 1.1	A	B	C	D	☒ E
Question 1.2	A	B	C	☒ D	E
Question 1.3	A	B	☒ C	D	E
Question 1.4	A	B	C	☒ D	E
Question 1.5	☒ A	B	C	D	E
Question 1.6	☒ A	B	C	D	E
Question 1.7	A	B	C	D	☒ E
Question 1.8	A	☒ B	C	D	E
Question 1.9	A	B	☒ C	D	E
Question 1.10	A	B	C	D	☒ E
Question 1.11	A	☒ B	C	D	E
Question 1.12	A	B	C	☒ D	E
Question 1.13	☒ A	B	C	D	E

(3 x 13 = 39)

QUESTION 2 (ABC COSTING AND MAKE AND BUY DECISION)**(24)**

2.1. Costs saved if the bottles were purchased:

(4)

Direct materials	R200 000
Direct labour	R140 000
Variable overhead	R50 000
Supervisor's salary	R40 000
Total saving	R430 000

2.2. ABC manufacturing budget:

(11)

	Annual activity
Activity	
Product-level activity:	
Product development	R300
Supervision	R420
	R720
Batch-level costs:	
Material handling	R33 000
Inspection	R45 000
Set-up	R175 000
	R253,000
Unit-level costs:	
Pouring moulds	R100 000
Finishing	R50 000
	R150 000
Total cost	R403 720

Cost per unit = $403\,720 / 500\,000 = \mathbf{R0.8074}$

Direct material cost per unit = R0.2000

Total cost per bottle = R1.0074

2.3. Make-or-buy analysis under ABC:

(7)

Costs that will be avoided if bottles are purchased:

Direct material

R100 000



Activity costs:

Product-sustaining costs

R720



Batch-level costs

R253 000



Unit-level costs

R150 000



Total avoidable costs

R503 720



Total cost of purchasing (500 000 bottles @ R0.95 per bottle)

R475 060



Cost that will be saved if bottles are purchased

R28 720



2.4.

(2)

The difference in the results lies in the fact that ABC can more **accurately** identify all the costs that can be avoided by not manufacturing the bottles. The conventional analysis classified many factory costs as fixed and therefore assumed these could not be avoided (e.g. material handling, inspection and setups). ABC regards these costs not as fixed but as dependent on on-volume-related cost drivers. Therefore, it is possible to estimate more accurately the extent to which these non-volume-driven costs could be avoided by purchasing rather than making the bottles.



QUESTION 3. VARIANCES WITH PROCESS COSTING; MISSING DATA**(18)**

3.1. Schedule of equivalent units and standard quantities allowed.

	Direct materials	Direct labour
Units completed	6 000	6 000
Equivalent units in WIP		
800 x 100%	800 ✓	
800 x 75%		600 ✓
Total equivalent units	6 800 ✓	6 600 ✓
Standard quantities per unit	8 kg	6 DLH
Standard quantities earned	54 400 kg ✓	39 600 DLH ✓

(5)

3.2. Calculation of variances and other amounts.

(a) Direct labour rate variance $= AH (AR - SR)$

$= 36\,500 (R8.24 - R7)$ ✓

$= \text{R45 260 unfavourable}$ ✓

(2)

(b) Direct labour efficiency variance $= SR (AH - SH)$

$= R7 (36\,500 - 39\,600)$ ✓

$= \text{R21 700 Favourable}$ ✓

(2)

(c) Actual quantity of material used:

Direct material quantity variance = $AP (AQ - SQ)$

= $4 (AQ - SQ)$

= R1 500 Unfavourable ✓

Therefore: $R4 (AQ - 54,400) = R1 500$

$AQ - 54,400 = R375$

$AQ = 54 775$ kilograms ✓✓

(3)

(d) Actual price paid per kilogram of direct material:

Actual price = $R249\,250 / 50\,000$ kg

= R4.985 per kg ✓✓

(2)

(e) Direct material and direct labour cost transferred to finished goods:

Direct material cost transferred	6,000 units x R32	R192 000
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Direct labour cost transferred	6,000 units x R42	<u>R252 000</u>
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Total cost transferred		R444 000
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 ✓✓

(2)

(f) Direct material and direct labour cost in November 30 balance of work in process inventory:

Direct material	800 units x R32	= R25 600
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Direct labour	800 units x 75% x R42	= R25 200
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Total cost in ending work in process inventory		= R50 800
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(2)

QUESTION 4. BREAK-EVEN ANALYSIS FOR DECISION MAKING

(19)

4.1. Contribution margin = $R40.00 - (R20.00^* + R2.50^{**})$
= $R40.00 - R22.50$
= $R17.50$

Break-even units = fixed cost / contribution margin
= $R340,000^{***} / R17.50$
= 19,428.57 or 19,429 units

* $R800,000 / 40,000\text{units} = R20.00$ per unit

** $R100,000 / 40,000$ units = $R2.50$ per unit

*** $R320,000 + R20,000 = R340,000$

(5)

4.2 Margin of safety

Break-even = fixed cost / contribution ratio
= $R340,000 / 0.4375$
= 777,142.86 or 777,143

Margin of safety = $R1,600,000 - 777,143$
= $R822,857$

Projected increase in profit: $(6,000)(3.04) = R18\ 240$

(3)

4.3.	Order price	R25,00	✓	
	Variable cost goods sold	R20,00	✓	
	Variable admin and selling	R 2,50	✓	
	Contribution margin	R 2,50	✓	
	Add: savings	R 0,54	✓	
	Net contribution margin	R3,04 per unit	✓	(6)

4.4	Order price	R29,00	✓	
	Variable cost goods sold	R20,00	✓	
	Variable admin and selling	R 2,50	✓	
	Contribution margin	R 6,50 per unit	✓	
	Projected increase In profit:	$(2500)(6,50) = R16\ 250$	✓	

The first order has a greater projected contribution to profit. (5)