OCT/NOV MAC2601

1.1 C

Units purchased: 1 200 units
Purchase price R6.80
Freight charges 0.68
Total 7.48
Value is therefore equal to 1200 units*7.48=R8 976

1.2 B

1.3 B

200 000 / 40 000 = R5 per machine hour (overhead allocation rate)
R5 x 35 000 = R175 000 applied overheads
R225 000 – R175 000 = R50 000 underapplied

1.4 C

Pre determined recovery rate = R810 000/125 000=R6.48
Budgeted overheads: R600 000/6.48=92 593 hours rounded

1.5 A

1.6 D

	Isitya	**Ikopi**
	R	**R**
Sales at split-off point	120 000	90 000
Sales after further processing	190 000	150 000
Incremental revenue	70 000	60 000
Further processing cost	30 000	30 000
Profit/ (loss) from further processing	40 000	30 000

Both Isitya and Ikopi renders more net profit after further processing and should therefore be processed further.

1.7 A

high-low method

$$= \frac{R2\,917\,200 - R2\,195\,200}{12\,000 - 8\,000}$$

= 180,50

Therefore, R180,50+R242 = R422,50

1.8 Ignore this question.

1.9 D

1.10 C

QUESTION 2
(a) Direct costing: weighted average method

Contribution statement of comprehensive income for the year ended 31 October 2013
Vivo (Pty) Ltd

	R	
Sales (15 000 x R200)	3 000 000	^
Less: Variable costs	(2 480 000)	
Opening inventory (2 500 x R150①)	375 000	✔
Variable manufacturing costs (20 000 x R165②)	3 300 000	✔
Cost of goods available for sale	3 675 000	
Less: Closing inventory (7 500③/22 500 x R3 675 000)	(1 225 000)	✔ ✔
Variable manufacturing cost of sales	2 450 000	
Variable selling and admin costs (15 000 x R2)	30 000	^(P)
Contribution	520 000	^ (Wording)
Less: Fixed costs	(230 000)	
Selling and admin (given)	80 000	^
Manufacturing (given)	150 000	✔
Net profit before tax	290 000	^(Adding up)
		(7)

① R105 + R45 = R150
② R120 + R45 = R165
③ 2 500 + 20 000 -15 000 = 7 500

(b) Absorption costing: weighted average method

Statement of comprehensive income for the year ended 31 October 2013 Vivo (Pty) Ltd

		R	
Sales (from (i))		3 000 000	^
Less:	Cost of sales	(2 562 500)	
Opening inventory (given)		393 750	^^ (P)
Variable manufacturing costs (from (a))		3 300 000	✔
Fixed manufacturing costs (given)		150 000	^^ (P)
Cost of goods available for sale		3 843 750	
Less: Closing inventory		(1 281 250)	✔ ✔
(7 500/22 500 x R3 843 750)			
Gross profit		437 500	^ (Wording)
Less:	Selling and administration costs	(110 000)	
Variable (from (a))		30 000	^^(P)
Fixed (given)		80 000	^
Net profit before tax		327 500	^
			(8)

QUESTION 3

(a)

Total machine hours

C1	200* 5 hours	=	1 000	^
C2	250* 4 hours	=	1 000	^
C3	100*2,25 hours	=	225	^
C4	300*3hours	=	900	^

Total hours= 1000+1000+225+900= 3 125 ✔

Total production overheads = R40 000+R20 000+R15 000+R10 000+ R25 000= R110 000

Overhead allocation rate = 110 000 / 3 125 hours =R35,20 ^^

Product	C2 R	
Overheads at R35,20 per machine hour (35,20 x 4)	140,80	✔ (principle)

(b)

Costs	**R**	**Cost driver volume**	**Activity rate**
Machine department costs	R40 000	3 125 hours ✔	R12,80 per machine hour
Set up costs	R20 000	20 ✔	R10 000 per production run
Receiving	R15 000	60 ✔	R250 per requisition raised
Inspection	R10 000	50 ✔	R200 per inspection
Material handling and dispatch	R25 000	25 ✔	R1 000 per order executed

QUESTION 4

(a) SIMPLE SNACKS (PTY) LTD.
Weighted average quantity statement for June 2013; WP = 10%

Physical units			Equivalent units			
Input		**Output**	**Raw materials**		**Conversion cost**	
(units)	**Details**	**(units)**	**Units**	**%**	**Units**	**%**
300 000	WIP - opening					
400 000	Put into production					
	Completed and transferred	√ 420 000	∧ 420 000	100	∧420 000	100
	Normal loss①	√16 000	∧ P16 000	100	∧ P 1 600	10
	Abnormal loss②	∧ P 24 000	∧ P 24 000	100	∧ P 2 400	10
	WIP - closing	∧ 240 000	∧ 240 000	100	∧216 000	90
700 000		700 000	700 000		640 000	

① (700 000 – 300 000 = 400 000 x 4% = 16 000

Note to marker: ∧ P= Principle marks

② Balancing figure

(b) SIMPLE SNACKS (PTY) LTD.
FIFO Quantity statement for June 2013; WP = 100%

Physical units			Equivalent units			
Input		**Output**	**Raw materials**		**Conversion cost**	
(units)	**Details**	**(units)**	**Units**	**%**	**Units**	**%**
300 000	WIP - opening					
400 000	Put into production					
	Completed from:					
	- Opening inventory①	√288 000	∧ -	-	∧P 230 400	80
	- Current production③	∧ P132 000	132 000	100	132 000	100 ∧ P
	Completed and transferred	420 000	132 000		362 400	
	Normal loss②	√18 400	∧ P 18 400	100	∧P18 400	100
	Abnormal loss③	∧ P 21 600	∧ P21 600	100	∧P21 600	100
	WIP - closing	∧ 240 000	∧ 240 000	100	∧216 000	90
700 000		700 000	412 000		618 400	

① 300 000 x 96%
② (700 000 – 240 000) = 460 000 x 4% = 18 400
③ Balancing figure

Note to marker: ∧ P= Principle marks

QUESTION 5

Note: If the (f) or (u) is incorrect or not indicated, -½ mark

(a)

(i) Labour rate variance

(AR – SR) x AT ^

Standard hours per unit= 90 000/ 9000= 10 hours per prepaid device ✔

Budgeted cost per unit= 10 hours * R15= R150 ✔

Actual costs	=R1 600 0000
Actual hours at standard rate (80 000 hours* R15 per hour)	= R1 200 000
Unfavourable variance	**= R400 000** ^

OR

Difference in rate (R20①-15) - paid more	R5
Actual hours	80 000
Variance unfavourable	**400 000**

① Actual rate: 1 600 000 / 80 000 = R20 per labour hour

(ii) Labour efficiency variance

(AT – ST) x SR ^

Actual hours worked * standard rate per hour= 80 000 hours* R15	=	R1 200 000	^^
Standard hours allowed * standard rate per hour= 90 000/9 000 * 8 000 * R15	=	R1 200 000	^^
Variance (neither favourable, nor unfavourable)	**=**	**R0**	^

(iii) Total labour Variance

Actual costs	= R1 600 000	✔
Standard = (8 000 units* 10*R15 per hour)	= R1 200 000	✔
Unfavourable variance	= R400 000	✔

OR

Rate variance: R400 000 (U) + Efficiency variance: R0 = R400 000(U)

(b)

(AP – SP) x AQ ^

Material CTA 1

Actual quantity = 500 kg

Actual price paid = R24 ^
Standard price = R19 ^
Paid more therefore **Unfavourable** variance= R5* 500 kg ^
Material CTA 1= R2 500 ^

OR

AC	AQ x SP
R12 000	500 x 19 = R9 500

R2 500 (u)

Material CTA 2

Actual quantity = 400 kg ^

Actual price paid = R15 ^
Standard price = R20 ^
Paid less therefore **favourable** variance =R5* 400 kg= R2 000 ^

OR

AC	AQ x SP
R6 000	400 x 20 = R8 000

R2 000 (f)

c.
(i) True ✔
(ii) True ✔

Question 6

NOTE: Half marks if not x R12 for contribution.

Outcome value	Probability	Weighted contribution	
40 000 x 12 = R480 000	15%	72 000	^^
60 000 x 12 = R720 000	5%	36 000	^^
80 000 x 12 = R960 000	35%	336 000	^^
110 000 x 12 = R1 320 000	45%	594 000	^^
Expected value of contribution	100%	1 038 000	^^

5 marks

Question 7

(a)

Variable manufacturing overheads per unit

$$= \frac{5\,994 - 4\,202}{1\,592 - 1\,080}$$

$$= \frac{1\,792}{512}$$

= R3,50 √

Total fixed cost @ highest observation = R5 994 - (1 592 x R3,50)
= 5 994 – 5 572
= R422

Total cost for July with variable cost per unit above = R422 + (1 530 x R3,50) √ **principle for substituting**

= 422 + 5 355
= R5 777 √

(b)

Observation	Volume X	Total costs Y	XY	X^2
1	1 200	4 560	5 472 000	1 440 000
2	1 272	4 932	6 273 504	1 617 984
3	1 080	4 202	4 538 160	1 166 400
4	1 320	5 364	7 080 480	1 742 400
5	1 392	5 520	7 683 840	1 937 664
6	1 592	5 994	9 542 448	2 534 464
∑	7 856 ∧	30 572 ∧	40 590 432 √	10 438 912 √

$\Sigma xy = a\Sigma x + b\Sigma x^2$……①

$\Sigma y = an + b\Sigma x$……..②

40 590 432 ∧**principle** = a7 856 ∧**principle** + b10 438 912∧**principle** ……③

30 572 = a6 + b7 856 ……④

243 542 592 = 47 136a + 62 633 472b ……⑤ (③ x 6)

240 173 632 = 47 136a + 61 716 736b ……⑥ (④ x 7 856)

3 368 960 = 916 736b ……⑦ (⑤ – ⑥)

$$b = \frac{3\,368\,960}{916\,736}$$

b = 3.67 (variable cost per unit) √

OR

40 590 432 = a7 856 + b10 438 912……③

30 572 = a6 + b7 856 ……④

121 771 296 = 23 568a + 31 316 736b ……⑤ (③ x 3)

120 086 816 = 23 568a + 30 858 368b ……⑥ (④ x 3 928)

1 684 480 = 458 368b ……⑦ (⑤ – ⑥)

$$b = \frac{1\ 684\ 480}{458\ 368}$$

b = R3.67 (variable cost per unit)

Solving equation b, we obtain

30 572 = 6a + 7 856 (3.67) **√** principle

6a = 30 572 – 28 831,52
a = 1 740,48/6
a = R290,08 (fixed cost per month)

FC for the financial year = 290,08 x 12 = R3 480,96

OR

40 590 432 = 7 856a + 10 438 912 (3,67)

7 856a = 40 590 432 – 38 310 807,04
a = 2 279 624,96/7 856
a = R290,18 (fixed cost per month)

FC for the financial year = 290, 18 x 12 **∧** = R3 482,16

OR

If unrounded b = 3,67495… is substituted into ③ or ④ to calculate a:

a = R283,60 rounded
b = R3,67 rounded

Question 8

a.

Outcome value	Probability	Weighted contribution
R50 000	30%	15 000
R80 000	100% - 30% = 70%	56 000
Expected value of increase in contribution associated with adding one new product		R71 000

^^
✔ ^
^

b. Expected value of lowest level

Outcome value	Probability	Weighted contribution
R100 000	90%	90 000
R150 000	10%	15 000
Expected value of increase in contribution associated with lowest level		R105 000

^^
^^

Expected value of one level higher (add 2 products)

Outcome value	Probability	Weighted contribution	
R105 000	60%	63 000	
R90 000	40%	36 000	
Expected value of increase in contribution associated with adding 2 new products		**R99 000**	**Final answer**

✔ (If same value as above was brought down, P mark)
✔
✔

c. Adding 2 new products (explanation not asked, but it is "highest expected value of increase in contribution of all three options" – they have to choose between an increase in contribution of R71 000 from (a), R0 (given) or R99 000 from (b) and has to select the highest). Lecturers to decide before marking commences whether these will be awarded as principle marks, or not.

✔ ✔ Both marks are Principle marks if the answer is based on the calculations in a and b)
If there are no calculations, the student gets ZERO