FINANCIAL ACCOUNTING 700	**DEPARTMENT OF ACCOUNTING**
Seminar RS 8 – Suggested solution	
PH Ferreira	**UP**

SUGGESTED SOLUTION TO CLASS EXAMPLE A

Part a

	R
Sales [**C2**]	492 500
Cost of sales [**C3**]	(371 400)

Part b

NOTES FOR THE YEAR ENDED 31 DECEMBER 20X1

3.   Profit before tax

	20X1
	R
Included in profit before tax are the following	
- Write-off of inventory [**C3**]	8 000

4.   Inventory

	20X1
	R
Raw materials (1 000 x 2,5)	2 500
Finished goods [**C4**]	196 000
	198 500

CALCULATIONS

C1.   **Units manufactured in 20X1**

	Kg
Raw material opening inventory	10 000
Raw material purchases	100 000
Raw material closing inventory	(1 000)
Additions to production process	109 000
Units manufactured (109 000 kg/2 kg)	54 500

C2.   **Sales**

	R
20 December – 31 December: 5 000 x 10	50 000
1 January – 19 December: (54 500 [**C1**] – 5 000 – 20 000) x 15	442 500
	492 500

C3.   **Cost of sales**

	R
Raw material opening inventory (10 000 x 2)	20 000
Raw material purchases (100 000 x 2,5)	250 000
Raw material closing inventory (1 000 x 2,5)	(2 500)
	267 500
Labour costs (54 500 [**C1**] x 0,5 hour x 4,4)	119 900
Overheads	180 000
Recovered [(180 000 / 60 000 = 3) 54 500 x 3]	163 500
Unrecovered overheads written off	16 500
	567 400
Finished goods closing inventory [**C4**]	(196 000)
Inventory (10,2 x 20 000)	204 000
Write-down	(8 000)
	371 400

OR

	R
Cost of first 5 000 units [(10,2 [**C4**] – ,50 x 2) x 5 000]	46 000
Cost of next 29 500 units	
[10,2 [**C4**] x (54 500 [**C1**] – 20 000 – 5 000)]	300 900
Unrecovered overheads [(60 000 – 54 500 [**C1**]) x 3]	16 500
Write down of inventory [(10,2 [**C4**] – 9,8 [**C4**]) x 20 000]	8 000
	371 400

C4.   **Finished goods closing inventory**

	R
Cost	
Raw material cost per unit (2 x 2,5)	5,0
Labour cost per unit (4,4/2)	2,2
Overheads per unit (180 000/60 000)	3,0
	10,2
Thus cost price (10,2 x 20 000)	204 000
Net realisable value	
Selling price	10,0
Selling expenses (10 x 2%)	(0,2)
	9,8
Thus net realisable value (9,8 x 20 000)	196 000

SUGGESTED SOLUTION TO QUESTION 1

1.	Prove that inventory complies with the definition of an asset: (The Conceptual Framework par.4.4(a))
	Resource – the saleable item/consumable;
	Control – the entity can do with the inventory as it pleases;
	Past event – purchase of inventory;
	Future economic benefits – selling proceeds/revenue from services.

2.	If the net realisable value is lower than the cost, the future economic benefits are less than the carrying amount of the asset. An expense arises in the sense that there is a decrease in economic benefits in the form of a depletion of an asset (reduction in value), which results in a decrease in equity. This reduction in equity is not the result of distributions to equity participants (The Conceptual Framework par. 25(b), The Conceptual Framework par. 34).

	This reduction is also the result of the application of the faithful representation characteristic to ensure that assets are not overstated and expenses understated (The Conceptual Framework QC 12).

3.	Prove that cost of sales comply with the definition of an expense: (The Conceptual Framework par. 25(b))

	Decrease in economic benefits in the form of outflow of assets – inventory (an asset) flows from the entity, resulting in a decrease in economic benefits. This reduction in economic benefits leads to a reduction in equity (equity = assets less liabilities).

SUGGESTED SOLUTION TO QUESTION 2

1.	**SONPYN**

	Treatment: The inventories of Sonpyn should be valued at a cost of R382 000 computed as follows:

	R
Raw materials at cost	200 000
Other direct costs	144 000
Portion of factory overheads	38 000
	382 000

	This amount should be included in the statement of financial position under the heading "Inventories - finished goods" and an accounting policy note should explain the basis on which finished goods have been valued.

	Reason: IAS 2 requires that inventories be valued at the lower of cost and net realisable value of the separate items or groups of similar items. Cost is defined as that expenditure incurred in bringing the product to its present location and condition. Thus, it includes the direct costs and an appropriate proportion of production overheads, but excludes selling and administrative overheads.

	As Sonpyn is a steady selling product which shows reasonable profit margins, net realisable value is higher than cost. Hence, the inventories should be valued at a cost.

2.	**SEERSTIL**

	Treatment: These inventories should be valued at its net realisable value which, on the basis of an assumption discussed below, is R346 000. This is substantially below its cost of R647 000. The amount of R346 000 should be included as part of the "Inventories - finished goods" in the statement of financial position. The write down should be disclosed in terms of IAS 2.36(e).

	Reason: As explained in (1) above, cost does not include a portion of selling expenses but, following the provisions of IAS 2, should include:

	R
Raw materials at cost	340 000
Other direct costs	260 000
Portion of factory overheads	47 000
	647 000

However, in this case net realisable value is relevant. If we assume that each 100g pack will sell for the same price as the competitor's product, the net realisable value may be calculated as follows:

	R	R
Sale proceeds		
$\frac{1\ 300\ 000}{100}$ = 13 000 at R35		455 000
Future costs:		
Packaging	20 000	
Additional advertising	30 000	
Portion of future selling expenses	59 000	(109 000)
		346 000

SUGGESTED SOLUTION TO QUESTION 3

1. **Accounting policy**

   Inventories are valued at the lower of cost and net realisable value. Inventories are valued according to the FIFO cost formula.

2. **Cost per ton**

	R	
Suppliers price	150	
Customs	10	
Transport	20	
Variable cost	25	
Fixed costs	20	(R30 000 ÷ 1 500)*
	225	per ton

   *   *IAS 2.13 determines that the fixed production overheads must be allocated based on normal capacity instead of actual capacity.*

   Net realisable value per ton:

	R	
Selling price	240,00	
Selling costs	(3,00)	R3 000 ÷ 1 000 t
Delivery costs	(7,50)	
	229,50	

Show at the lowest of two values	=	R225 x 2 000 ton
	=	R450 000

3. **Raw materials**

	Cost R	NRV R
Supplier's price	150	160
Customs	10	
Transport	20	
	180	

   Although the net realisable value is lower, IAS 2.32 determines that the cost must still be used for the valuation of raw materials if the finished goods in which it is used is expected to be sold at historical cost or higher price. According to the information in the question, this is the case.

   Raw material value = R180 x 5 000 ton = R900 000.

4.   Raw materials are not written down below cost if the finished products in which they will be incorporated are expected to be sold above cost.

However, if the selling price of the finished product declines to R230, the net realisable value of the finished product will be R219,50 (230-3-7,50), which is lower than it's cost of R225 per ton.

This may require the raw materials to be written down to net realisable value. Net realisable value is defined as the estimated selling price less the costs of completion and the costs necessary to make the sale.

To calculate the net realisable value of the raw materials, the selling price of the finished product needs to be reduced with the costs necessary to make the sale, as well as the production costs that are incurred to convert the raw materials into finished goods:

	R
Selling price	230,00
Selling costs	(3,00)
Delivery costs	(7,50)
Variable production costs	(25,00)
Fixed production costs	(20,00)
Net realisable value	174,50

As the total cost of the raw materials amounts to R180 (150+10+20) while the net realisable value amounts to R174,50, a write-down of R5,50 per ton is required.

SUGGESTED SOLUTION TO QUESTION 4

1)   INVENTORY VALUES

1.   Raw materials

	R
Invoiced costs ($1 000 000 x R3,60)	3 600 000
Dockage	22 500
Transport costs	15 000
Clearing services	1 500
Customs duties	150 000
Total: 100 000 kg	3 789 000
Closing inventories (30 000 @ R37,89)	1 136 700

2.   Finished products

	Cattex R	Fumex R
Raw materials		
(26 000 ÷ 0,9* x 37,89)	1 094 600	
(18 000 ÷ 0,9 x 2 x 37,89)		1 515 600
Direct labour		
(152 000 + 24 000 – 6 000) x 8	1 360 000	
(164 000 + 20 000) x 8		1 472 000
Direct factory overheads	160 000	170 000
Fixed factory overheads		
(1 120 000/(8 x 22 000) x		
(152 000 + 24 000 - 6 000)	1 081 818	
(1 200 000/(164 000 + 20 000)		
x 184 000		1 200 000
Total manufacturing costs	3 696 418	4 357 600
Per product (3 696 418/26 000);	142,17	
(4 357 600/18 000)		242,09

*   The raw materials input is taken as: 26 000 ÷ 0,9 = 28 889. This number is reconciled as follows:

Total input per question	30 000 kg
Normal spillages of 10%	3 000 kg
Abnormal spillages	1 000 kg

The 3 000 kg should be allocated as follows between the "good" and "abnormal" products in the ratio 26 000:1 000.

26 000 + (26/27 x 3 000)	28 889
1 000 + (1/27 x 3 000)	1 111
Total kilograms consumed	30 000

Cost price of closing inventory

(0,25 x 26 000 x 142,17)	924 105	
(0,25 x 18 000 x 242,09)		1 089 405

Net realisable value

Selling price	150,00	300,00
Selling costs:		
Delivery costs	(2,00)	(2,00)
Sales commission	(7,50)	(15,00)
	140,50	283,00

Statement of financial position amounts

Cattex: (0,25 x 26 000 x 140,50)	913 250
Fumex: (0,25 x 18 000 x 242,09)	1 089 405
	2 002 655

2) REPORT

Letter head

Date

The financial manager
Topline Limited
Address

Sir

VALUATION OF CLOSING INVENTORY

Audit procedures indicated that the inventories of raw material and finished products are overvalued.

Raw materials

IAS 2 determines that inventories should be shown at the lower of cost and net realisable value.

Costs include, amongst others, the cost price, import duties, other taxation apart from those that can be recovered from the government, transport costs, handling charges and other costs directly attributable to acquisition.

In the following instances your valuation does not comply with the requirements of International Financial Reporting Standards:

The invoice costs should, according to IAS 21, be translated at the spot rate on the transaction date. The transaction takes place at the stage where the risks and rewards associated with ownership are transferred to the buyer. This is the date on which the inventories were shipped free on board from the USA.

The foreign exchange difference cannot be included in the cost price of inventories.

The VAT should not be included in the cost price of raw materials, as it is an input tax and can be recovered from the Receiver of Revenue.

Finished products

IAS 2 determines than abnormal amounts of wasted materials should not be included in the cost price of inventories. In the case of Cattex, only (26 000 ÷ 0,90) 28 889 kg of raw materials should be used to manufacture 26 000 finished products.

Labour costs attributable to abnormal idle time should consequently not be allocated to the cost price of inventories. The labour costs related to idle time during the strike should therefore not be attributable to the cost of Cattex.

Fixed production overheads should be allocated to cost of inventories based on normal capacity. Fixed production overheads were over recovered as a result of the 6 000 abnormal idle hours included with labour hours. This portion of fixed production overheads should not form part of the cost price of Cattex.

At year-end it is necessary to compare the cost of each product with its net realisable value. If the cost exceeds the net realisable value, the product should be written down to net realisable value. This is the case with Cattex, where the net realisable value amounts to R140,50 per unit.

3) **INVENTORIES IN THE FINANCIAL STATEMENTS**

Revenue	x xxx xxx
Amount of inventories recognised as expense (1)	(6 179 651)
Gross profit	xxx xxx

(1) *Finished products*	
[(3 696 418 + 4 357 600) x 75%]	*6 040 514*
Abnormal raw materials	
[(30 000 - 26 000 ÷ 0,9) x 37,89]	*42 100*
Abnormal labour (6 000 x 8)	*48 000*
Unallocated production overheads	
(1 120 000 - 1 081 818)	*38 182*
Write-off to net realisable value	
(924 105 - 913 250)	*10 855*
	6 179 651

2. **Profit before tax**	**R**
Included in profit before tax are the following:	
Write-down of inventory to net realisable value	10 855

3. **Inventories**	**R**
Raw materials	1 136 700
Finished products	2 002 655
	3 139 355

SUGGESTED SOLUTION TO QUESTION 5

The historical cost of inventories consists of all purchase costs, conversion costs and other costs incurred to bring inventories to their current location and condition (IAS 2.10). These costs include, amongst others, fixed and variable overheads (IAS 2.12).

Producion overheads represent costs (except for direct material and labour) incurred for production purposes.

Lease finance charges: finance charges should not form part of production overheads. The depreciation on the capitalised assets will however form part of production overheads.

Recruitment costs for personnel, other advertising costs and research costs: these costs do not directly relate to bringing inventories to their current location and condition and it therefore does not form part of production overheads.

Factory administration costs form part of production overheads (IAS 2.12).

When allocating production overheads, the costs should be linked to the normal capacity of the production plant and not to the monthly production volume (IAS 2.13). Normal capacity is the normal production volume expected over the course of a number of production periods

This ensures an even allocation of overheads to inventory and ensures that idle time or inefficient utilisation of the production plant will not be capitalised as part of inventories.

SUGGESTED SOLUTION TO QUESTION 6

PART A
PRETORIA BRANCH
STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
FOR THE MONTH ENDED 31 MARCH

	FIFO	WA
Sales (700 x 100)	70,000	70,000
Cost of sales	(28,000)	(34,532)
Opening inventory	-	-
Purchases (calc. 1)	177,500	177,500
Closing inventory (calc. 2.3)	(149,500)	(142,968)
Gross profit	42,000	35,468

The manager of the Pretoria branch would prefer the FIFO-method, since it will give him a higher commission.

1. 1 000 x 40 + 500 x 55 + 2 000 x 55 = 177,500

2. 300 x 40 + 500 x 55 + 2 000 x 55 = 149,500

3. (1 000 x 40 + 500 x 55) = 67,500
   67 500/1 500 = 45
   (67 500 – 200 x 45 + 2 000 x 55)/(1 500 – 200 + 2 000) = 51,06
   (1 500 – 200 + 2 000 – 500) x 51,06 = 142,968

CAPE TOWN-BRANCH
STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
FOR THE MONTH ENDED 31 MARCH

	FIFO	WA
Sales (700 x 100)	70,000	70,000
Cost of sales	(28,000)	(26,952)
Opening inventory	-	-
Purchases (calc. 1)	127,500	127,500
Closing inventory (calc. 2.3)	(99,500)	(100,548)
Gross profit	42,000	43,048

The manager of the Cape Town branch would prefer the weighted average method, since it will give him a higher commission.

1. 1 000 x 40 + 500 x 55 + 2 000 x 30 = 127,500

2. 300 x 40 + 500 x 55 + 2 000 x 30 = 99,500

3. 1 000 x 40 + 500 x 55 = 67,500
   67 500/1 500 = 45
   (67 500 – 200 x 45 + 2 000 x 30)/(1 500 – 200 + 2 000) = 35,91
   (1 500 – 200 + 2 000 – 500) x 35,91 = 100,548

PART B

IAS 2.25 states that the cost of inventories should be assigned by using the first-in-first-out or weighted average cost formulas.

The issue is whether it is acceptable for the two branches to use different cost formulas.

The measurement of **like transactions** and other events must be carried out in a consistent way **throughout the entity** and over time (The Conceptual Framework QC20).

An entity should use the same cost formula for all inventories having similar nature and use to the entity (IAS 2.25).

Since the coffee is used for the same purpose by both branches, the same cost formula should be used.

A difference in geographical location of inventories by itself, is not sufficient to justify the use of different cost formulas.

Although the coffee shops are geographically separated, the same cost formula should still be used, since the inventories are similar in nature and use.

Management should consult with the different coffee shop managers on which cost formula should be used as standard across the company.