ISCTE Business School
Instituto Universitário de Lisboa

MANAGEMENT ACCOUNTING I

MANAGEMENT

School Year 2014/2015

LIFE company produces several joint products, according to the following manufacturing process:

- The material M1 is converted at Stage A and then the intermediate product P1 and the by-product S are obtained.
- The by-product S cannot be sold without being firstly at a stage of manufacturing package.
- The intermediate product P1 is converted at Stage B, together with the material M2 and then the co-products P and Q are obtained.
- The co-product Q is marketed after additional conversion at Stage C.

Regarding March of the year N, the following data are known:

1 – Products variations:

	Opening stocks	Production	Sales	Selling price
Co-product P	400 l at 8 € /l	5 000 l	5 200 l	10 € /l
Co-product Q	800 l at 6 € /l	3 000 l	2 800 l	7.5 € /l
By-product S	0	3 000 l	2 000 l	3 € /l

2 – Conversion costs:

Stage A	32 000 €
By-product package	3 000 €
Stage B	15 000 €
Stage C	5 250 €

3 – Materials consumption:

Material M1	7 000 €
Material M2	5 500 €

4 – Non-manufacturing expenses:

Administrative (fixed)	4 000 €
Selling (distribution) (fixed)	3 000 €
Variable selling (distribution) (Co-product P)	1.95 €/l
Variable selling (distribution) (By-product S)	0.5 €/l

Regarding the month in analysis and knowing that the company uses the absorption costing system and the valuation criterion FIFO, it is required:

a) The unit MCFP of each one of the co-products, using the net realizable value method.
b) The Profit and Loss Statement per Functions and Products.
c) The unit MCFP of each one of the co-products, using the criterion of potential sales value and assuming that the selling price of the co-products would be 24 €/l and 10 €/l, regarding the co-product P and the co-product Q respectively.

Case for Assessment 3 - Solution

a) Ascertainment of the unit MCFP of each one of the co-products, using the net realizable value method

	MU	Qt. prod.	SP	PSV	Specific Costs		Sales at SOP		Joint Costs	MCFP (€)	
					Man.	Non-man.	Value	%		Global	Unit
Co-product P		5 000	10	50 000	-	9 750	40 250	70	38 500	38 500	7.7
Co-product Q		3 000	7.5	22 500	5 250	-	17 250	30	16 500	21 750	7.25
Total				72 500	5 250	9 750	57 500	100	55 000		

Joint costs to allocate to the intermediate product P1:

Material M1 + Stage A – By-product S = 7 000 + 32 000 – (3 000 x 3 € - 3 000 x 0.5 € - 3 000€)

= 39 000 – 4 500 = 34 500 €

Joint costs of the co-products:

Intermediate product P1 + Material 2 + Stage B = 34 500 + 5 500 + 15 000= 55 000 €

Joint costs to allocate to P = 55 000 x 0.7 = 38 500 €

Joint costs to allocate to Q = 55 000 x 0.3 = 16 500 €

MCFP of P = 38 500 €

MCFP of Q = 16 500 + 5 250 =21 750 €

b) Profit and Loss Statement per Functions and Products

Description	Co-product P	Co-product Q	By-prod. S	Total
1 - Sales	52 000	21.000	6.000	79.000
2 - MCPS	40 160	19.300	5.000	64.460
3 – Gross profit	11 840	1.700	1.000	14.540
4 – Selling (distribution) expenses				
Variable	10.140		1.000	11.140
Fixed				3.000
5 – Administrative expenses				4.000
6 – Operational profit				- 3.600

MCPS P = 400 l x 8 € + 4.800 l x 7.7 = 3 200 + 36 960 =40 160 €

MCPS Q = 800 l x 6 + 2 000 x 7.25 = 4 800 + 14 500 =19 300 €

MCFP of S = Joint costs + MSCs = 4 500 + 3 000 = 7 500 €
Unit MCFP of S = 7 5000€ / 3 000 = 2.5€
MCPS of S = 2.5€ x 2 000 = 5 000€

c) Ascertainment of the unit MCFP of each one of the co-products, using the criterion of the potential sales value

	MU	Qt. Prod.	SP	PSV		Joint Costs	MCFP	
				Value	%		Global	Unit
Co-product P		5 000	24	120 000	80	0.8 x 55 000 = 44 000	44 000	8.8
Co-product Q		3 000	10	30 000	20	0.2 x 55 000 = 11 000	16 250	5.42

Joint costs of the co-products:

Intermediate product P1 + Material 2 + Stage B = 34 500 + 5 500 + 15 000= 55 000 €

Joint costs to allocate to P = 55 000 x 0.8 = 44 000 €

Joint costs to allocate to Q = 55 000 x 0.2 = 11 000 €

MCFP of P = 44 000 €

MCFP of Q = 11 000 + 5 250 = 16 250 €