

MANAGEMENT ACCOUNTING II

**Mid Term Test
School Year 2015/2016
Management – 2nd Year**

26 November, 2015

Time: 80 minutes

Undergraduation _____/Class _____

Name _____/

No. _____

ATTENTION:

1 – You must keep the test stapled. You have to deliver it with the test sheet.

2 – The questions are only considered correct, if duly justified by the calculations.

Part I

(Based on this test sheet, answer the questions 1 to 7 inclusive)

ALTO company produces and markets two products which are obtained according to the following production process:

- The Material M is converted in the section A, giving rise to the intermediate product L1 which is partly sold (**Product L**). The part which is converted in the section B and the **Product T** is obtained.
- The Material X is stored in a Material Warehouse (RMW), whose allocation unit is 7.5 € per ton consumed.

Regarding the budget for the year N, prepared using the absorption costing system, the following data are known, per semesters:

1. Sales programme

	MU	Unit Selling Price	Term Receipts	1st Semester	2nd Semester
Product L	Ton	120 €	60 days	7 500	7 500
Product T	Ton	350 €	60 days	50 000	60 000

It is expected that the sales are uniform in each semester.

2. Objectives of unit costs and consumptions per unit produced.

	MU	Unit Cost	Intermediate product L1	Product T
Direct Materials				
M	Ton	45 €	1.0	---
Intermediate product L1	Ton	?	---	1.1
Conversion Costs				
A	Mh	25 €	1.5	---
B	Lh	40 €	---	5

3. Policy of products stocks

- Finished products: it is required that the stocks at the end of each month are 1.5 months of the sales of the following month; it is expected that the sales for January of the year N+1 are equal to the sales of January of the year N;
- Intermediate products: it is required at the end of each semester one month of sales of the very semester;

4. Policy of materials stocks

- It is required that the closing stocks of the year (31/12/N) correspond to 10% of the annual consumption;
- The purchases are uniform over the course of the year. Term payments of the purchases is 30 days.

5. Opening stocks

- Material M: 13 650 Tons
- Product T: 25 000 Tons
- Intermediate product L1: 2 000 Tons

Note: in the Opening Balance Sheet, the opening stocks are equal to the ones forecasted to year N.

6. Expenses with employees

- Salaries: 20 000 € per month;
- Social Expenses on salaries:
 - Holiday pay paid in June and Christmas pay paid in November; the value of each pay corresponds to one month of salaries;
 - Expenses regarding salaries on the employer's responsibility for the Social Security: 23.75% on salaries and pays;
 - Other Expenses with employees: 37 500 €

The expenses of the employer for the Social Security are paid in the following month.

7. Other data

- Opening Cash: 25 000 €.
- Cash policy: it is required to have 20 000 € at the end of each month.
- Cash Balance: cash budget superavit of 500 000 € in the 1st semester and cash budget deficit of 250 000 € in the 2nd semester.
- Short Term Financing: A credit line to the amount of 500 000 €, is floated to use and support cash, according to the needs of the company. Refunds will occur according to the availability of the company. The interests are paid at the annual rate of 8% on the first day of the semester, follows the one of the use.
- Short Term Investments: Short term investments may be invested, paid at the annual rate of 1.5%, to refund according to availability. Interests are receivable on the first day of the semester, which follows the one of the investment.
- On the 1st of November, N-3 the company took out a loan in a medium and long term to the amount of 4 500 000 €, to pay in 10 equal half-yearly payments. Interests are payable at the annual rate of 5%.

Part II

(Based on this test sheet, answer the questions 8 to 15 inclusive)

FORMA company produces and markets the product DELTA and the by-product DELTA1.

The management accounting information system adopts the uniform cost centres (sections) method and estimates income using the **Absorption Costing System**. The following sections are defined:

Section 1 work unit: Mh

Section 2 work unit: Mh

Section 3 work unit: Lh

There is also a raw materials warehouse (RMW) whose costs are allocated to the quantities bought of the materials X and Y.

1 – Regarding the annual budget for the year N, the following forecasted data are known:

- Forecasted production and annual sales

	Product DELTA	By-product DELTA1
Production	15 000 Units	600 Units
Sales	12 000 Units at 500 € /Unit	600 Units at 30 € /Unit

It is expected that the sales of the product DELTA are allocated as follows: 60% in the 1st semester and 40% in the 2nd semester, while the sales of the by-product DELTA 1 are uniform over the course of the year, as it is forecasted.

- Forecasted unit costs and consumptions

	MU	Unit Cost (in €)	Unit consumptions per unit produced
Direct Materials			
X	Ton	130	0.48
Y	Ton	100	0.72
Conversion Costs			
S1	Mh	180	0.21
S2	Lh	350	0.24
By-product DELTA 1	Unit	30	0.04

- Annual budget of the main sections:

Description	S1: 3 200 Mh	S2: 3 600 Mh
1. Direct costs		
Variable	96 000	180 000
Fixed	360 000	954 000
Total	454 500	1 134 000
2. Reallocations		
S3	120 000	126 000
3. Total Cost	576 000	1 260 000

- The standard (forecasted) work unit of the section S3 is 75 €/Lh and the forecasted allocation unit for the RMW is 25 €/Ton.

2 – Regarding October of the year N, the following data are known:

- Materials

	Purchases	Consumptions
Material X	1 000 tons at 100 €/ton	750 tons
Material Y	1 700 tons at 90 €/ ton	1 200 tons

- Sections (activity and costs)

	Activity	Fixed Direct Costs (€)	Variable Direct Costs (€)	Reallocations of S3 (Lh)
S1	375 Mh	23 625	12 000	400
S2	300 Mh	46 500	13 500	500
S3	?	22 500	45 000	-
RMW	-	46 500	-	100

- Production and sales

	Product DELTA	By-product DELTA 1
Production	1 500 Units	75 Units
Sales	1 200 Units at 400 € /Unit	70 Units at 32 € /Unit

Name _____ Class _____

Part I

Questions 1 to 7 inclusive

Questions	Solution																											
1. The forecasted production of T for the 2nd semester is: a) 62 500 Tons b) 40 000 Tons c) 57 500 Tons d) None of the previous ones	<table><tr><td></td><td>1st Sem</td><td>2nd Sem</td><td>TOTAL</td></tr><tr><td>Opening Stock</td><td>25 000</td><td>15 000</td><td>25 000</td></tr><tr><td>Production</td><td>40 000</td><td>57 500</td><td>97 500</td></tr><tr><td>Sales</td><td>50 000</td><td>60 000</td><td>110 000</td></tr><tr><td>Closing Stock</td><td>15 000</td><td>12 500</td><td>12 500</td></tr></table>					1st Sem	2nd Sem	TOTAL	Opening Stock	25 000	15 000	25 000	Production	40 000	57 500	97 500	Sales	50 000	60 000	110 000	Closing Stock	15 000	12 500	12 500				
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Production	40 000	57 500	97 500																									
Sales	50 000	60 000	110 000																									
Closing Stock	15 000	12 500	12 500																									
2. Assuming that the forecasted production for the product T in the 1st semester is 40 000 tons, the forecasted production for the intermediate product L1 in the same semester is: a) 50 750 Tons b) 70 750 Tons c) 46 750 Tons d) None of the previous ones	<table><tr><td></td><td>1st Sem</td><td>2nd Sem</td><td>TOTAL</td></tr><tr><td>Opening Stock</td><td>2 000</td><td>1 250</td><td>2 000</td></tr><tr><td>Production</td><td>50 750</td><td>70 750</td><td>121 500</td></tr><tr><td>Consumptions</td><td>44 000</td><td>63 250</td><td>107 250</td></tr><tr><td>Sales</td><td>7 500</td><td>7 500</td><td>15 000</td></tr><tr><td>Closing Stock</td><td>1 250</td><td>1 250</td><td>1 250</td></tr></table>					1st Sem	2nd Sem	TOTAL	Opening Stock	2 000	1 250	2 000	Production	50 750	70 750	121 500	Consumptions	44 000	63 250	107 250	Sales	7 500	7 500	15 000	Closing Stock	1 250	1 250	1 250
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3. Assuming that the annual forecasted production for the intermediate product L1 amounts to 121 500 tons, the value relative to suppliers to register in the Forecasted Balance Sheet is: a) 450 000 € b) 575 000 € c) 675 000 € d) None of the previous ones	Opening stock + Purchases = Consumptions + Closing stock 13 650+ Purchases = 121 500 x 1 + 0.1 x 121 500, therefore annual Purchases=120 000 tons Purchases 2nd semester= 60 000 tons Suppliers in the 2nd semester = 60 000 x 45 = 2700 000 € Value for Balance Sheet = 2 700 000/6 x 1= 450 000 €																											

4. Regarding the question 3 and assuming the same, the forecasted value for the conversion costs associated with the intermediate product L1 is: a) 4 556 250 € b) 5 467 500 € c) 911 250 € d) None of the previous ones	Conversion Costs: Section A + RMW = 4 556 250 + 911 250 = 5 467 500 € Section A = 121 500 tons x 1.5 x 25 € = 4 556 250 € RMW = 121 500 tons x 7.5 € = 911 250 €
5. The sum to register in the forecasted Balance Sheet regarding the expenses on salaries on the responsibility of the employer for the Social Security amounts to: a) 4 750 € b) 9 500 € c) 23 750 € d) None of the previous ones	20 000 x 0.2375 x 1 month = 4 750 €
6. In the Forecasted Profit & Loss Statement, the sum of the financial expenses associated with the M L Term loan amounts to: a) 123 750 € b) 116 250 € c) 101 250 € d) None of the previous ones	Capital in debts on 1.1.N= 4 500 000 – 1 800 000 = 2 700 000 € Interests from 1.1. N to 1.5.N = (2 700 000 x 0.05) /12 x 4 + (2 700 000 – 450 000) x 0.05 /2 + (2 250 000 – 450 000) 0.05/12 x 2 = 45 000 + 56 250 + 15 000 = 116 250 €
7. To balance financially the company in the 1st semester, it forecasts: a) To invest Short Term Investments to the amount of 12 500 € b) To use the short term Financing to the amount of 12 500 € c) To use the short term Financing to the amount of 195 000 € d) None of the previous ones	Cash Inflows in the 1st semester = 25 000 + 500 000 =525 000 € Cash Outflows in the 1st semester: 20 000 + 450 000 + 2 700 000 x 0.05/2 = 537 500 € Cash Inflows – Cash Outflows = 525 000 – 537 500 = - 12 500 €

Part II
Questions 8 to 15 inclusive

Questions	Solution
8. The monthly allocation unit of the RMW is: a) 28.8 €/ton b) 17.2 €/ton c) 20 €/ton d) None of the previous ones	$AU (RMW) = (46\,500 + 100\,Lh \times 75\text{€}) / 2\,700\,tons = 20\text{ € /ton bought}$
9. The variance of the section S1 is equal to: a) -1 875 € (Fav) b) +1 875 € (Unf) c) -4 875 € (Fav) d) None of the previous ones	$Actual\,WU^*\,of\,S1 = (23\,625 + 12\,000 + 400 \times 75) / 375\,Mh = 65\,625 / 375\,Mh = 175\text{ €/Mh}$ $Variance\,of\,S1 = 375\,Mh (175 - 180) = -1\,875\text{ € (Fav)}$
10. The purchases variance of the material X is equal to: a) - 30 0000 € (Fav) b) -5 000 € (Fav) c) +30 000 € (Unf) d) None of previous ones	$Variance\,of\,the\,material\,X = 1\,000\,tons (100 + 25 - 130) = -5\,000\text{ € (Fav)}$ Or $Variance\,of\,the\,material\,X = 1\,000\,tons [(100 - (130 - 25))] = -5\,000\text{ € (Fav)}$
11. The monthly unit MCFP of the product DELTA is: a) 255 €/Unit b) 261.75 €/Unit c) 258.5 €/Unit d) None of the previous ones	$Materials\,cons. = (750\,tons \times 130\text{ €} + 1\,200\,tons \times 100 + 375\,Mh \times 180 + 300\,Mh \times 350 - 75\,units \times 30\text{ €}) / 1\,500\,Units = (217\,500 + 172\,500 - 2.250) / 1\,500\,Units = 258.5\text{ €/unit}$

Questions	Solution
12. The productivity variance of the material X is: a) - 3 750 € (Fav) b) +3 900 € (Unf) c) +2 700 € (Unf) d) None of the previous ones	Productivity variance = 1 500 Units x 130 x (750/1 500 – 0.48) = 1 500 x 130 x (0.5 – 0.48) = + 3 900 € (Unf)
13. The activity variance of S1 is: a) + 1 875 € (Unf) b) -10 312.5 € (Fav) c) -12 187.5 € (Fav) d) None of the previous ones	Activity variance = Flexible standard (budget) expenses (FSE) – Allocated expenses FSE = 375 Mh x (96 000 +120 000)/3 200 Mh +360 000/12 = 375 Mh x 67.5 + 30 000 = 55 312.5 € Allocated expenses = 375 Mh x 180 = 67 500 € Activity variance = 55 312.5 – 67 500 = - 12 187.5 € (Fav) Or 360 000/3 200 x (3 200/12-375) = 112.5 x (266.(6) -375) = - 12 187.5 € (Fav)
14. The variance of the sales cost of the product DELTA is: a) – 0 € b) +51 000 € c) + 102 000 € d) None of the previous ones	Variance of MCPS = standard unit MCFP x(actual sales quantity – budgeted sales quantity) Standard Unit MCFP = 130 x 0.48 + 100 x 0.72 + 180 x 0.21 + 350 x 0.24 – 30 x 0.04 = 255 €/Unit Variance of MCPS= 255 x (1 200 – 12 000 x 0.4/6) = 255 x (1 200 – 800) = + 102 000 €
15. The prices variance associated with the sales of the by-product DELTA 1 is: a) -140 € (Fav) b) -150 € (Unf) c) +140 € (Fav) d) None of the previous ones	Prices variance: actual sales quantity x (actual price – standard price) = = 70 (32 – 30) = + 140 € (Fav)

Questions 16 to 19

**Mark each correct answer drawing a circle on the respective paragraph
(each wrong answer discounts 0.25 marks)**

Questions
16. Budgeted management is a supporting management framework which: a) Consists exclusively of the preparation of the annual budget; b) Consists only of the preparation of the annual budget and of the comparison of the forecasts with the actual achievements; c) Consists of the preparation of the annual budget, of the comparison of the forecasts with the actual achievements, and of the variances analysis; d) None of the previous ones.
17. The purchases variance of a material: a) Is due to the component of the purchase cost relative to the warehousing cost, when there is a Raw Materials Warehouse whose costs are allocated to the input; b) Is due to the component of the purchase cost relative to the external cost, when there is a Raw Materials Warehouse whose costs are allocated to the input; c) It is always, and exclusively, a variance of quantities bought; d) None of the previous ones.
18. The flexible budget: a) It is equivalent to the periodical reviews carried out regarding the annual budget as a consequence of the variances analysis; b) It is equivalent to the monthly accounting prepared using the standard (budgeted) costing system; c) It consists of a framework of variances analysis based on different explanatory reasons; d) None of the previous ones.
19. Efficiency variance : a) If results from the best or from the worst advantage of the fixed costs estimated in a section owing to the fact of working in a month where the number of working hours is different from what was forecasted; b) Results from the fact that a section, to produce a unit of finished product, has worked a number of activity units different from what was forecasted; c) It is the component of the manufacturing variance relative to the materials consumed; d) None of the previous ones.

