

Written Exam for the B.Sc. or M.Sc. in Economics summer 2016

**Managerial Accounting**

Guiding Solutions

17. June 2016

(3-hour open/closed book exam)

## Exercise 1:

### Q1.

#### a.

	EUR
Sales	2.220.000
Opening inventory (1.200 units)	42.000
Variable manufacturing costs (34.800 units)	1.218.000
Closing inventory (6.000 units)	(210.000)
Cost of goods sold (variable)	1.050.000
Marketing and administrative overhead:	
Variable (30.000 units)	(162.000)
Contribution margin	1.008.000
Fixed manufacturing costs	278.400
Marketing and administrative overhead	(340.000)
Operating profit	49.600

#### b.

	EUR
Sales	2.220.000
Opening inventory (1.200 units)	54.000
Variable manufacturing costs (34.800 units)	1.218.000
Fixed manufacturing costs	278.400
Closing inventory (6.000 units)	(258.000)
Cost of goods sold	1.292.400
Gross profit	927.600
Marketing and administrative overhead:	
Variable (30.000 units)	(162.000)
Fixed	(680.000)
Operating profit	85.600

### Calculations:

Unit cost: Variable	$(14,00 + 15,00 + 6,00) = 35,00$
Absorption (prior year)	$35,00 + 330,000/33,000 = 45,00$
Absorption (current year)	$35,00 + 278.400/34,800 = 43,00$

Production:  $6.000 + 30.000 - 1.200 = 34.800$  units

Opening inventory:  $1.200 * 35,00$  (Variable);  $1.200 * 45,00$  (Absorption) inventory

Closing inventory:  $6.000 * 35,00$  (Variable);  $6.000 * 43,00$  (Absorption) inventory

**Q2.**

The purposes are different. While Absorption Costing is primarily used to comply with external accounting rules the contribution approach is used primarily for managerial purposes. The difference between the methods occur because manufacturing overhead are moved between periods as a consequence of the difference in production and sales sizes.

**Exercise 2**

**Q1.**

Here it would be relevant to argue in favor of a contribution margin statement. In addition the common costs are allocated seemingly arbitrary as the General and administrative expenses are split evenly while advertising is allocated based on sales to the different territories.

## Q2

I	Total Company		Sales territories					
	In 1000.DKK	%	København		Sjælland & Fyn		Jylland	
	In 1000.DKK	%	In 1000.DKK	%	In 1000.DKK	%	In 1000.DKK	%
Sales	1.000.000	100,0%	225.000	100,0%	400.000	100,0%	375.000	100,0%
Less variable expenses:								
Cost of goods sold	409.700	41,0	81.450	36,2	140.000	35,0	188,250	50,2
Shipping expense	38.800	3,9	8.550	3,8	16.000	4,0	14,250	3,8
Total variable expenses	448.500	44,9	90.000	40,0	156.000	39,0	202.500	54,0
Contribution margin	551.500	55,2	135.000	60,0	244.000	61,0	172,500	46,0
Less traceable fixed expenses:								
Advertising	259.000	25,9	54.000	24,0	100.000	25,0	105.000	28,0
Salaries	156.500	15,7	45.000	20,0	44.000	11,0	67.500	18,0
Utilities	20.250	2,0	6.750	3,0	6.000	1,5	7.500	2,0
Depreciation	42.500	4,3	13.500	6,0	14.000	3,5	15.000	4,0
Total traceable fixed expenses	478.250	47,8	119,250	53,0	164.000	41,0	195.000	52,0
Sales territories segment margin	73.250	7,3	15.750	7,0%	80.000	20,0%	(22,500)	(6,0)%
Common fixed expenses not traceable to the regions:								
Advertising (general)	40.000	4,0						
General admin. expenses	120.000	12,0						
Total common fixed expenses	160.000	16,0						
Operating loss/profit	£(86.750)	(8,7)%						

## Q 3

The number of issues raised and the depth of argumentation is decisive for how well this question is answered.

### Exercise 3:

#### Q1.

The students should in this question demonstrate that they understand the difference between different responsibility centres and be able to give examples of organizational units where the different forms can be relevant.

#### Q2.

Here the students need to discuss the financial as well as non-financial measures that can be relevant measuring the performance of the different responsibility centres. The answer should be informed and not just a laundry list of measures.

**Q3.**

This question is quite open. It is important that the student understand the strengths and limitations of the different methods in relation to performance measurement and (sub)optimization. In addition the student can choose to explain and discuss the methods in relation to the different responsibility centres.