

Written Exam at the Department of Economics Summer 2017

**Managerial Accounting**

Final Exam

16. June 2017

(3-hour closed book exam)

Please note that the language used in your exam paper must correspond to the language for which you registered during exam registration.

**This exam question consists of 4 pages in total**

*NB: If you fall ill during the actual examination at Peter Bangsvej, you must contact an invigilator in order to be registered as having fallen ill. Then you submit a blank exam paper and leave the examination. When you arrive home, you must contact your GP and submit a medical report to the Faculty of Social Sciences no later than seven (7) days from the date of the exam.*

### Exercise 1

The German company Stuttgart GmbH is a wholesale distributor of T-shirts. It purchases T-shirts from manufacturers from India and China and distributes them in the three regions given in the table below. The three regions have each their own manager and sales staff. The T-shirts that the company distributes vary in profitability.

For some time Stuttgart GmbH has shown financial losses. In an effort to overcome the problem and improve the company's performance, management has requested that the monthly statement of profit or loss should be segmented by sales region. The company's first attempt to prepare a segmented statement is given below. This statement is for April. Cost of goods sold and shipping expense are both variable; other costs are all fixed.

	Sales region		
	North	South	West
Sales (in EUR)	<u>1,350,000</u>	<u>2,400,000</u>	<u>3,000,000</u>
Less regional expenses:			
Cost of goods sold	488,700	840,000	1,506,500
Advertising	324,000	600,000	820,000
Salaries	270,000	264,000	540,000
Utilities	40,500	36,000	60,000
Depreciation	81,000	84,000	120,000
Shipping expense	<u>51,300</u>	<u>96,000</u>	<u>114,000</u>
Total regional expenses	<u>1,255,500</u>	<u>1,920,000</u>	<u>3,160,500</u>
Regional profit (loss) before corporate expenses	<u>94,500</u>	<u>480,000</u>	<u>(160,500)</u>
Less corporate expenses:			
Advertising (general)	54,000	96,000	120,000
General administrative expense	<u>150,000</u>	<u>150,000</u>	<u>200,000</u>
Total corporate expenses	<u>204,000</u>	<u>246,000</u>	<u>320,000</u>
Operating profit (loss)	<u>(109,500)</u>	<u>234,000</u>	<u>(480,500)</u>

### Questions

1. Discuss the strengths and weaknesses that you see to the statement format illustrated above.
2. Explain the basis that seems to be used to allocate the corporate expenses to the regions. Please comment on these allocations?
3. According to your suggestions please prepare a segmented statement of profit or loss for April using the contribution approach. Show a total column as well as data for each region.
4. Analyse the statement that you prepared in Question 3. Which points that might help to improve the company's performance would you particularly bring to the attention of management?

## Exercise 2

The newly started Company Nice Dishes manufactures a variation of decorated dinner and dessert plates. Demand for those products has been rapidly increasing over time, and management asked you to assist them in determining the financial best sales and production mix for the coming year. The company's sales department has made the following information available for you for that purpose:

Product	Estimated demand next year (units)	Estimated selling price per unit in DKK
Amanda	10,000	270.00
Claudia	8,400	110.00
Ida	7,000	420.00
Siv	8,000	200.00
Tanja	65,000	160.00

The standard costs for direct materials and direct labour per unit are as follows:

Direct product	Direct materials	Direct Labour
Amanda	86.00	64.00
Claudia	22.00	40.00
Ida	128.80	112.00
Siv	40.00	80.00
Tanja	64.00	32.00

The following additional information is available:

- The company's plant has a capacity of 26,000 direct labour-hours per year.
- The direct labour rate is DKK 160 per hour; this rate is expected to remain unchanged during the coming year.
- Fixed costs are in total DKK 2,080,000 per year. Variable overhead costs are DKK 40 per direct labour-hour.
- All of the company's non-manufacturing costs are fixed.
- The company has at present no inventory of finished products.

## Questions

1. Calculate the contribution margin per direct labour-hour used on each product.
2. Prepare a schedule showing the total direct labour-hours that will be required to produce the units estimated to be sold during the coming year.
3. Examine the data you have computed in (1) and (2) above. Indicate how much of each product should be made so that total production time is equal to the 26,000 hours available.
4. What is the highest price, in terms of a rate per hour that the Company would be willing to pay for additional labour time capacity?

### **Exercise 3**

Alpha is a company based in Norway that develops computer software. It has recently acquired two new companies, Delta and Gamma. Delta is a well-established company that is also based in Norway. It develops computer software and was a competitor of Alpha. Gamma, which is based in Italy, is a company that also develops software and also produces memory sticks. Gamma was acquired so that it could produce memory sticks for Alpha and Delta.

The CEO of Alpha has realized that the acquisition of these two companies will cause some challenges for him in terms of decision making, planning and control. He is considering of implementing a decentralized structure. However he is unsure of the advantages and disadvantages of such a structure. In addition he would not know of how much autonomy to give to the new companies, and which performance measure to use to measure their performance. As a consequence he has contacted you as a newly educated Master of Science in Economics for help.

### **Questions**

1. Explain the major advantages and disadvantages that would be experienced by Alpha in operating in a decentralized structure.
2. Explain which types of responsibility centres you would recommend as being most appropriate for Delta and Gamma in a decentralized structure.
3. Discusses the issues that need to be considered in relation to setting transfer prices for transfers made from Gamma to Alpha and Delta.