Written Exam for the B.Sc. or M.Sc. in Economics summer 2015

Managerial Accounting

Final Exam/ Elective Course

22. June 2015

(3-hour closed book exam)

Please note that the language used in your exam paper must correspond to the language of the title for which you registered during exam registration. I.e. if you registered for the English title of the course, you must write your exam paper in English. Likewise, if you registered for the Danish title of the course or if you registered for the English title which was followed by “eksamen på dansk” in brackets, you must write your exam paper in Danish.

This exam question consists of 5 pages in total

Exercise 1:

Sales and cost data for Missing Overview A/S for the year just completed:

In DKK	
Finished goods inventory, beginning	400.000
Finished goods inventory, ending	800.000
Depreciation, factory	540.000
Administrative expenses	2.200.000
Utilities, factory	160.000
Maintenance, factory	800.000
Supplies, factory	220.000
Insurance, factory	80.000
Purchases of raw materials	2.500.000
Raw materials inventory, beginning	180.000
Raw materials inventory, ending	120.000
Direct labour	1.400.000
Indirect labour	300.000
Work in progress inventory, beginning	340.000
Work in progress inventory, ending	600.000
Sales	10.000.000
Selling expenses	1.600.000

Questions

1 Prepare a schedule of cost of goods manufactured.

2 Prepare a statement of profit or loss.

3 Assume that the company produced the equivalent of 10.000 units of product during the year just completed. What was the unit cost for direct materials? What was the unit cost for factory depreciation?

4 Assume that the company expects to produce 15.000 units of product during the coming year. What per unit cost and what total cost would you expect the company to incur for direct materials at this level of activity? For factory depreciation? (In preparing your answer, assume that direct materials are a variable cost and that depreciation is a fixed cost; also assume that depreciation is computed on a straight-line basis.)

5 As the manager responsible for production costs, explain to the managing director any difference in unit costs between Questions 3 and 4 above.

Exercise 2:

Due to changes in sales of its sole product – a wall lamp – Light A/S has been experiencing difficulty for some time. The company's statement of profit or loss for the most recent month is given below:

In DKK

Sales (19.500 units × 600 DKK)	11.700.000
Less variable expenses	8.190.000
Contribution margin	3.510.000
Less fixed expenses	3.600.000
Net loss	(90.000)

Questions

1 Compute the company's contribution margin ratio (CM ratio) and its break-even point in both units and amount (DKK).

2 The manager believes that a 320.000 DKK increase in the monthly advertising budget, combined with an intensified effort by the sales staff, will result in a 1.600.000 DKK increase in monthly sales. If the president is right, what will be the effect on the company's monthly profit or loss?

3 Refer to the original data. The sales manager is convinced that a 10% reduction in the selling price, combined with an increase of 1.200.000 DKK in the monthly advertising budget, will cause unit sales to double. What will the new statement of profit or loss look like if these changes are adopted?

4 Refer to the original data. The Marketing Department thinks that a new package for the lamp would help sales. The new package would increase packaging costs by 15 DKK per unit. Assuming no other changes, how many units would have to be sold each month to earn a profit of 195.000 DKK?

Exercise 3:

Division A and division B are two separate divisions within the same company. The managers of both divisions are evaluated on their ability to maximize their own division's return on investment (ROI). Assume the following information is available for the two divisions:

In DKK

	Case		
	1	2	3
Division A:			
Capacity in units	80.000	400.000	150.000
Number of units now being sold to outside customers on the intermediate market	80.000	400.000	100.000
Selling price per unit on the intermediate market	60	180	150
Variable costs per unit	36	130	80
Fixed costs per unit (based on capacity)	12	30	40
Division B:			
Number of units needed annually	5.000	30.000	20.000
Purchase price now being paid to an outside supplier	54	178	150*

*Before any quantity discount.

Managers are given full autonomy and are free to decide if they will participate in any internal transfers. All transfer prices are negotiated.

Required

1 Refer to Case 1 above. Division A can avoid 5 DKK per unit in commissions on any sales to Division B. Will the managers agree to a transfer and if so, within what range will the transfer price be?

2 Refer to Case 2 above. A study indicates that Division A can avoid 10 DKK per unit in shipping costs on any sales to Division B.

- **(a)** Would you expect any disagreement between the two divisional managers over what the transfer price should be? Please explain.
- **(b)** Assume that Division A offers to sell 30.000 units to Division B for 176 DKK per unit and that Division B refuses this price. What will be the loss in potential profits for the company as a whole?

3 Refer to Case 3 above. Assume that Division B is now receiving an 8% quantity discount from the outside supplier.

- **(a)** Will the managers agree to a transfer? If so, what is the range within which the transfer price would be?
- **(b)** Assume that Division B offers to purchase 20.000 units from Division A at 120 DKK per unit. If Division A accepts this price, would you expect its ROI to increase, decrease, or remain unchanged? Please explain.

Exercise 4

1 Explain shortly the purposes of Absorption Costing, Variable Costing and Activity Based Costing.

2 Explain the main differences as well as the main weaknesses and advantages of the three concepts.