EVALUATION GUIDELINES - Written examination

EXC 21221
Strategic Management Accounting

Department of Accounting, Auditing and Business Analytics

Start date:	12.12.2017	Time 09:00
Finish date:	12.12.2017	Time 14:00

For more information about formalities, see examination paper.

Question (10%)

Price per DAB-radio second half of 2017: 2 800 000/8 000 = 350.00
This price per unit will be the same for second half of 2018.

	Scenario 1	Scenario 2
Sales volume	6 000 units	7 600 units
Sales price per unit	780 kr	702 kr
Purchase price per unit	350 kr	350 kr
Sales income	4 680 000	5 335 200
Goods of goods sold	2 100 000	2 660 000
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Operating margin	2 580 000	2 675 200
Salaries and other personnel costs	1 200 000	1 600 000
Other payable operating costs	600 000	800 000
Depreciation	100 000	100 000
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Budgeted profit first half of 2018	680 000	175 200

Conclusion: The profit will be significantly improved if the company does not alter the sales price per unit, but instead accepts that the demand will drop by 20%. A contributing factor is that the step costs are cut by as much as 600 000.

Question 2 (10%)

Expected income statement second half of 2017:

Sales income	6 240 000
Cost of goods sold	2 800 000

Contribution margin	3 440 000
Salaries and other personnel costs	1 600 000
Other payable operating costs	800 000
Depreciation	100 000

Forecast second half 2017	940 000

The net cash flow for the second half of 2017 must be +526 000, since the closing balance of the bank account is 526 000 higher than the opening balance. The situation will then look as follows:

Incoming payments from customers	6 240 000 – 200 000 = 6 040 000

= Total incoming payments January-June	6 040 000
Paid to suppliers	2 800 000 + 800 000 – 244 000 = 3 356 000
Paid salaries and other personnel costs	1 600 000
Increase of other short-term claims	30 000

Reduction of other short-term liabilities	328 000
Paid long-term debts	200 000

= Total outgoing payments January-June	5 514 000

We can then conclude as follows

Opening balance bank deposits	358 000
+ Incoming payments	6 040 000
- Outgoing payments	5 514 000
= Closing balance bank deposits	884 000

Question 3 (10%)

With the simplification of accepting that a six-month period has 180 days, will the company per 31st December 2017 have received 150/180 of the sales income pertaining to 150 of 180 days of sales activities. This amounts to 5 200 000. With 20 days of credit we would have received 160/180 from the sales income instead, which amounts to 5 546 667.
The cash-flow would have been improved by 346 667.

Still with the assumption that there are 180 days in the second half of the year, we have paid 150/180 of the purchases from July through December and since there are no changes in inventory this purchases equal the number of units sold. This amounts to 2 333 333. With a 20 days credit period, we would have paid 160/180 of the purchases from the same period, which is 2 488 889.
The cash-flow would have been weakened by 155 556.

As a consequence of this, the three balance sheet items would change:

	Original balance	Balance after new credit periods	Change
Bank deposits	884 000	884 000 + 346 667 – 155 556 = 1 075 111	+ 191 111
Accounts Receivable	1 040 000	1 040 000 – 346 667 = 693 333	-346 667
Accounts Payable	600 000	600 000 – 155 556 = 444 434	-155 566

Question 4 (5%)

Net cash-flow in the first quarter: 722 000 – 1 312 000 = -590 000

Cash-flow from operating activities	x
Cash-flow from investing activities	-346 000
Cash-flow from financing activities (1 200 000 * 10%)	-120 000

= Net cash-flow	-590 000

x = -124 000

Question 5 (15%)

We can explain the causal relations by starting with the last step in the cause-and-effect relationships and flip backwards through the chain:

Controlling activities: Management must define its measures from reported variances between ideal and actual performance, within the areas that are critical to the company. This may help the company to allocate management attention and competence to areas where there is room for (and a need for) improvement. Managing on a KPI level is different from traditional financial controlling because we focus on the value drivers instead of analyzing the result of the value creation as such. This is only possible to achieve with an efficient scorecard.

Scorecard: The scorecard shows how the company has measured its performance within the areas considered of utmost necessity to gain control over, in order to reach an overall and long-term strategy. The scorecard will show measured performance compared to quantifiable targets, and an evaluation of this performance in the form of a score and/or a color code, in addition to a trend indicator.
This is only possible to achieve with well-functioning KPIs.

KPIs: A Key Performance Indicator (KPI) expresses how a company performs within an area considered critical for the company to gain control over, in order to reach its strategic goals. The KPIs are quantitative because we wish to express the measurement in terms of figures, such as money, time and percentages. A KPI will only be efficient when it actually measures what we want to achieve, which means that it must have a high degree of validity and reliability, and distinguish between lead and lag indicators.
This is only possible to achieve if we have a well-designed strategy map.

Strategy map: A strategy map is a graphical presentation of the relations between the various critical success factors, which helps us to draw the way to overall success. The strategy map visualizes the fact that financial success is a consequence of success with the customer and market perspective (for instance customer satisfaction) and that the success is a consequence of efficient internal processes (such as for instance ability to deliver on time). Success within the internal processes is a consequence of focus and attention brought to infrastructural areas (such as for instance the development of unique competence).
This is not possible to achieve if we do not have a knowledge about the critical success factors.

Critical success factor: A critical success factor is something that needs to happen in order for the company to succeed with an overall target. These factors are necessary conditions, but not always sufficient alone, for the strategies to give the intended results. What we consider critical depends on the strategy and the corresponding ambitions.
It is not possible to define critical success factors without first defining the company's targets.

Target: A target expresses something we want to happen in the future. Targets shall be defined in a SMART way (specific measurable, achievable, realistic and time-bound) and before we choose the KPI parameters, we need to make the targets operational by expressing what we want to achieve, in quantitative terms.
This is not possible without a developed strategy.

Strategy development: A company needs overall directions for how its organizational units, their managers and employees shall prioritize. Not all strategy can (and shall?) be planned in detail and a certain element of dynamics must be present to make it possible to change priorities along the way and open up for possibilities that may emerge.

Question 6 (10%)

This question focuses on the candidate's ability to generalize when a Balanced Scorecard model is described. This can be a relevant approach, because many of the critical success factors are often found in different companies.
The Balanced Scorecard has been criticized for being too simple and generic. A well-functioning model must reflect the strategy that the company intends to execute, and therefore are business specific and company specific very important and should not be left out.

But if we shall comment on a generic level and describe what is relevant for a large number of enterprises in many types of industries, critical success factors in the infrastructure and resource perspective will be:
- Sufficient production and administrative capacity
- Development of relevant competence and skills
- Development of a satisfied and motivated workforce
- Development of network, relations and alliances
- Product- and technology development
- Health, security and environmental issues
- Databases, procedures, protection of information and data

Generic critical success factors within the internal process perspective will be:
- More effective production
- Improved production quality
- Reduced off-line time on ICT and production systems
- Ability to deliver on time
- Reduced waiting and/or transportation time

Generic critical success factors within the customer and market perspective will be:
- Customer satisfaction
- Customer loyalty (returning customers, customers that recommend the products to others)
- Knowledge of brand
- Company reputation and image

Generic critical success factors within the financial perspective will be:
- Contribution margins
- Profit margins
- Return on Assets and Return on Equity
- Optimal net working capital
- Optimal financial gearing
- Ability to generate a positive cash-flow, particularly from operative activities
- Ability to generate dividend
- Development of market value

Question 7 (10%)

The Resource Based View, first presented by Birger Wernerfelt i 1984 and later developed and structured by Jay C. Barney in 1991, postulates that competition power and competitive advantages are created by the company's abilities to obtain, develop and keep valuable resources.

As opposed to Porter's Positioning School that explains competitive advantages from how a company adapts to the market, RBW is an *internal perspective* on what contributes to success in business.

Barney's VRIN model explains that competitive advantages are created from the company's valuable and rare resources, difficult for the competitors to imitate or substitute with other alternative resources. In a resources analyses it is often relevant to assess the company's joint competence, learning, experience, routines and procedures, utilization of technology and network. These are value drivers often identified in the resource and infrastructural perspective in the Balanced Scorecard model.

To secure future value creation the companies must focus on developing and keeping valuable and rare resources in a robust infrastructure. This is a central point in both the VRIN and Balanced Scorecard models.

Question 8 (20%)

a)

<u>Calculating activity rates</u>

Procurement	3 000 000/5 000 = 600,00 per order
Maintenance	1 000 000/2 000 = 500,00 per job
Machine calibration and set-up	400 000/4 000 = 100,00 per calibration
Quality control	2 000 000/10 000 = 200,00 per test

<u>Costs for utilized capacity</u>

Procurement	4 000 * 600,00 = 2 400 000
Maintenance	1 500 * 500,00 = 750 000
Machine calibration and set-up	3 000 * 100,00 = 300 000
Quality control	8 000 * 200,00 = 1 600 000

Total	5 050 000

Since total activity costs are equal to the total of costs for utilized capacity and costs for excess capacity and facility based costs should be kept out the ABC costing model due to the lack of identifiable costs drivers, the cost for the excess capacity will be as follows:

Total budgeted indirect costs	8 900 000
- Facility-based costs	2 500 000
- Costs for utilized capacity	5 050 000
= Costs for excess capacity	1 350 000

b)

	Alpha
Direct costs	1 000.00
Procurement	(300 * 600)/ 1 000 = 180.00

Maintenance	(200 * 500)/ 1 000 = 100.00
Machine calibration and set-up	(200 * 100)/ 1 000 = 20.00
Quality control	(600 * 200)/ 1 000 = 120.00

Total costs	1 420.00

Question 9 (10%)

The five basic principles of the lean-philosophy are:

1. Define product value the way our customers perceive it; do not do anything that the customers do not ask for and is willing to pay for
2. Eliminate non-value creating activities – avoid waste (muda)
3. Create a smooth process flow – avoid unevenness (mura) and overload (muri)
4. Just in Time – avoid overproduction and high inventories
5. Kaizen – strive for continuous improvement, towards perfection

Some examples of lean thinking:

- If the customer does not mind talking directly to a car mechanic who is fixing his car and the mechanic is comfortable having direct customer contact, do we then need a middle man at the garage's reception to whom we give the car keys and talk about the service jobs to be carried out?
- If the flight attendant spills coffee on a passenger, is it necessary for the passenger to file a claim against the airline, or could the crew be authorized to settle the case immediately?
- Can we create a working environment where our employees do not make errors or errors are discovered immediately, instead of having to fix errors in arrears, after the goods or services are delivered to our customers?
- Do we need an inventory of raw material if our suppliers can deliver what we need when we need it?
- Can we adjust production after demand and not produce anything before the customer has actually ordered it?