



YLIOPISTOTENTTI - UNIVERSITY EXAM

Opiskelijan nimi / Student name:	Opiskelijanumero / Student number:
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Opintojakson koodi and nimi / The code and the name of the course: Koodi / Code 721134A Tentin nimi / Name Cost Management Systems	
Tiedekunta / Faculty: OyKKK	
Tentin pvm / Date of exam: 2.3.2016	Tentin kesto tunteina / Exam in hours: 4
Tentin nro / No. of the exam: 1. kuulustelu	Opintopistemäärä / Credit units: 6
Tentaattori(t) / Examiner(s): Janne Järvinen, Erkki Lassila	Sisäinen postios. / Internal address: 6OyKKK
Sallitut apuvälineet / The devices allowed in the exam: <input checked="" type="checkbox"/> Nelilaskin / Standard calculator <input checked="" type="checkbox"/> Funktiolaskin / Scientific calculator <input type="checkbox"/> Ohjelmoitava laskin / Programmable calculator <input type="checkbox"/> Muu materiaali, tarkennettu alla / Other material, specified below:	
Tenttiin vastaaminen / Please answer the questions: <input checked="" type="checkbox"/> Suomeksi / in Finnish <input checked="" type="checkbox"/> Englanniksi / in English	
Kysymyspaperi on palautettava / Paper with exam questions must be returned: <input type="checkbox"/> Kyllä / Yes <input checked="" type="checkbox"/> Ei / No	

This test has four questions and a maximum of 40 pts. Please use complete sentences when answering the essay questions (no bullets, lists etc.)! Question no. 4 includes tables to help you structure your answer. However, please do not write on this exam sheet – use answering paper as always.

Kysymyksiin saa vastata suomeksi.

1) Key characteristics of Activity-Based Management (ABM). How does ABM differ from the more conventional Activity-Based Costing (ABC) and what do these two systems have in common? (10pts).

2) Cost of quality (COQ) model in management accounting. Also, comment on the potential usability of COQ –reporting for cost management purposes. (10 pts)

3) Pitfalls of the DCF (discounted cash flow) method in evaluating strategic investments (according to Kaplan and Atkinson) (10 pts)

4) ABC profitability analysis

A healthcare company specializes in hip, knee and shoulder replacement operations, known as surgical procedures. As well as providing these surgical procedures the company offers pre operation and post operation in-patient care, in a fully equipped hospital, for those patients who will be undergoing the surgical procedures.

Surgeons are paid a fixed fee for each surgical procedure they perform and an additional amount for any follow-up consultations. Post procedure follow-up consultations are only undertaken if there are any complications in relation to the surgical procedure. There is no additional fee charged to patients for any follow up consultations. All other staff are paid annual salaries.

The company’s existing costing system uses *a single overhead rate, based on revenue*, to charge the costs of support activities to the procedures. Concern has been raised about the inaccuracy of procedure costs and the company’s accountant has initiated a *project* to implement an activity-based costing (ABC) system.

The project team has collected the following data on each of the procedures.

<u>Procedure information</u>	<u>Hip</u>	<u>Knee</u>	<u>Shoulder</u>
Fee charged to patients per procedure	\$7000	\$9000	\$6000
Number of procedures per annum	600	900	500
Average time per procedure	2.0 hrs	1.2 hrs	1.5 hours
Number of procedures per theatre session	2	1	4
In-patient days per procedure	3	2	1
Surgeon’s fee per procedure	\$1100	\$1900	\$1400
% of procedures with complications	7%	6%	9%
Surgeon’s fee per follow up consultation	\$300	\$300	\$300
Cost of medical supplies per procedure	\$400	\$200	\$300

The project team has obtained the following information about the support activities.

Activity	Cost driver	Overheads
Theatre preparation for each session	Number of theatre preparations	865 000
Operating theatre usage	Procedure time	1 455 000
Nursing and ancillary services	In-patient days	5 451 000
Administration	Sales revenue	1 224 000
Other overheads	Number of procedures	950 000

Required:

(a) Calculate the profit per procedure for each of the three procedures, using the current basis for charging the costs of support activities to procedures (single overhead rate). (3p)

(b) Calculate the profit per procedure for each of the three procedures using activity-based costing (ABC). (5p)

(c) Based on your calculations, explain the potential benefits to the company of using an activity-based costing system instead of existing costing system. (2p)

Copy following tables to your answering paper if needed and fill in there: Please remember to show all the calculations.

(a) Profitability analysis using the current system:

	Hip \$	Knee \$	Shoulder \$
Fee charged to patient			
Surgeon's fee			
Fee for follow-up consultations			
Medical supplies			
Overhead cost			
Profit per procedure			

(b) Calculation of cost drivers (ABC):

Activity	Cost Driver	Overheads	No. of cost drivers	Cost per driver \$
Theatre preparation for each session				
Operating theatre usage				
Nursing and ancillary services				
Administration				
Other overheads				

(b) ABC overhead cost per procedure:

Activity	Hip	Knee	Shoulder
Theatre preparation for each session			
Operating theatre usage			
Nursing and ancillary services			
Administration			
Other overheads			
Total overhead cost per procedure			

(b) Profit per procedure (ABC):

	Hip \$	Knee \$	Shoulder \$
Fees charged to patients			
Surgeon's fee			
Fee for follow-up consultations			
Medical supplies			
Overhead cost			
Profit per procedure			

Finally, don't forget to answer the sub question (c)!

