



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: 7.4.2016	Tentin kesto tunteina / Exam in hours: 4
Tentin nro / No. of the exam: 2. kuulustelu (1. uusinta)	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) Relating to Activity-based management, ABM (Drury, lectures)
- Illustrate the key characteristics of ABM (4 pts)
 - what are the stages of ABM implementation? (1,5 pts)
 - how does the concept of (non) value adding activities relate to ABM? (1,5 pts)
 - Illustrate the 5-point scale advocated by Cooper and Kaplan (according to Drury)? (1,5 pts)
 - How are capacity-related decisions related to ABM? (1,5 pts)
- (10 pts)
- 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) Relating to allocation of service department costs to production cost centres (Kaplan and Atkinson):
- How does such internal allocation improve cost control and efficiency?
 - What kind of negative consequences may occur if internal service department costs are not assigned to user groups?
 - what are the economic insights provided by the reciprocal allocation method?
- (10 pts)

4) Calculation of payback, NPV and ARR for mutually exclusive projects.

Your company is considering investing in its own transport fleet. The present position is that carriage is contracted to an outside organization. The life of the transport fleet would be five years, after which time the vehicles would have to be disposed of. The cost to our company of using the outside organization for its carriage needs is £240 000 for this year. This cost, it is projected, will rise 12 % per annum over the life of the project. The initial cost of the transport fleet would be £740 000 and it is estimated that the following costs would be incurred over the next five years:

	Driver's Costs (£)	Repairs & Maintenance (£)	Other Costs (£)
Year 1	34 000	8 000	130 000
Year 2	35 000	13 000	135 000
Year 3	36 000	15 000	140 000
Year 4	37 000	17 000	136 000
Year 5	40 000	18 000	142 000

Other costs include *depreciation*. It is projected that the fleet would be sold for £150 000 at the end of year 5. It has been agreed to depreciate the fleet on a straight line basis.

To raise funds for the project your company is proposing to raise a long-term loan at **12.5%** interest rate per annum. You are told that there is an *alternative project* that could be invested in using the funds raised, which has the following projected results:

- Payback = 3 years
- Accounting rate of return = 30%
- Net present value = £140 000.

As funds are limited investment can only be made in one project.

Note: The transport fleet would be purchased at the beginning of the project and all other expenditure would be incurred at the end of each relevant year.

Required:

- (a)** Prepare a table showing the net cash savings to be made by the firm over the life of the transport fleet project. **(3p)**

(You may copy the table below to your answering paper and fill in there.)

(a)	Years				
	1	2	3	4	5
	(£)	(£)	(£)	(£)	(£)
Saving in fleet costs					
Driver's costs (-)					
Repairs and maintenance (-)					
Other costs (-)					
Net savings					

- (b)** Calculate the following for the transport fleet project. **(6p)**

- i. Payback period
- ii. Accounting rate of return
- iii. Net present value (Please find the discount factors below)

- (c)** Should investment be committed to the transport fleet or the alternative project outlined? Shortly state the reasons for your decision. **(1p)**

Year 1	0.889
Year 2	0.790
Year 3	0.702
Year 4	0.624
Year 5	0.555

Please remember to show all the calculations.

