

YLIOPISTOTENTTI - UNIVERSITY EXAM

Opiskelijan nimi / Student name:	Opiskelijanumero / Student number:
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Opettaja täyttää / Lecturer fills in:

Opintojakson koodi and nimi / The code and the name of the course: Koodi / Code 721134A Tentin nimi / Exam name Cost Management Systems	
Tiedekunta / Faculty: OyKKK	
Tentin pvm / Date of exam: 8.5.2017	Tentin kesto tunteina / Exam in hours: 3 h
Tentaattori(t) / Examiner(s): Hannele Kantola, Erkki Lassila	Opintopistemäärä / Credit units: 6
	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 Suomenkielisessä tutkinto-ohjelmassa olevalla opiskelijalla on oikeus käyttää arvioitavassa opintosuorituksessa suomen kieltä, vaikka opintojakson opetuskieli olisi englanti. Tämä ei koske vieraan kielen opintoja. (Kts. <u>Koulutuksen johtosääntö 18 §</u>) In a Finnish degree programme a student has a right to use Finnish language for their study attainment, even though the language of instruction is English, (excluding language studies) even when the language of instruction is other than Finnish. (See <u>the Education Regulations 18 §</u>)	
Kysymyspaperi on palautettava / Paper with exam questions must be returned: <input type="checkbox"/> Kyllä / Yes <input checked="" type="checkbox"/> Ei / No	

This test has three questions and a maximum of 24 pts. Please use complete sentences when answering the essay questions (no bullets, lists etc.)! Do not write on this exam paper, but provide your answers in the answer sheet.

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? (8 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) Calculation of payback, ARR and NPV 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 £220 000 for this year. This cost, it is projected, will rise 10 % per annum over the life of the project. The initial cost of the transport fleet would be £710 000 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	30 000	7 000	115 000
Year 2	30 000	12 000	120 000
Year 3	33 000	13 200	120 000
Year 4	34 000	14 800	130 000
Year 5	38 000	16 000	140 000

Other costs include *depreciation*. It is projected that the fleet would be sold for £120 000 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 11.5% 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 = 3,5 years
- Accounting rate of return = 23%
- 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. (2p) (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. (3,5p)

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

Year 1	0.897
Year 2	0.804
Year 3	0.721
Year 4	0.647
Year 5	0.580

(c) Should investment be committed to the transport fleet or the alternative project outlined? Shortly state the reasons for your decision. (0,5p)

Please remember to show all the calculations.

