

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: 22.2.2018	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 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 90 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) Explain the Theory of constraints (TOC) in optimizing the use of short-term resources and criticism for the theory? (30 pts)
- 2) Explain the concepts of life-cycle costing, target costing and Kaizen costing in management accounting. How do these concepts relate to each other? (30 pts)

3) Activity-based costing

Sampler Ltd makes three products, using broadly the same production methods and equipment for each. A conventional product costing system is used at present, although an activity-based costing (ABC) system is being considered. Details of the three products for a typical period are:

	Hours per unit		Materials per unit \$	Volumes Units
	Labor hours	Machine hours		
Product X	0,5	1,5	20	750
Product Y	1,5	1	12	1250
Product Z	1	3	25	7000

Direct labor costs \$14 per hour and production overheads are absorbed on a machine hour basis. The rate for the period is \$28 per machine hour.

- a) You are required to calculate the cost per unit for each product using conventional methods. (5 p.)

ACTIVITY-BASED COSTING CONTINUES ON NEXT PAGE...

Further analysis shows that the total of production overheads can be divided as follows:

	(%)
Costs relating to set-ups	35 %
Costs relating to machinery	20 %
Costs relating to materials handling	15 %
Costs relating to inspection	30 %
Total production overheads	100 %

The following activity volumes are associated with the product line for the period as a whole.

Total activities for the period:

	Number of set-ups	Number of movements of materials	Number of inspections
Product X	75	12	150
Product Y	115	21	180
Product Z	480	87	670
	<u>670</u>	<u>120</u>	<u>1000</u>

You are required

- b) to calculate the cost per unit for each product using activity-based costing (ABC) principles; (20 p.)
- c) to comment on the reasons for any differences in the costs in your answers to (a) and (b) related to Sampler Ltd. (5 p.)