## YLIOPISTOTENTTI - UNIVERSITY EXAM

| Opiskelijan nimi / Student name: | Opiskelijanumero / Student number: |
|---|---|
| | |

**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: 15.5.2019 | Tentin kesto tunteina / Exam in hours: 3 h |
|---|---|
| **Tentaattori(t) / Examiner(s):** Hannele Kantola, Erkki Lassila | **Opintopistemäärä / Credit units:** 6 |
| | **Sisäinen postios. / Internal address:** 6 OyKKK |

**Sallitut apuvälineet / The devices allowed in the exam:**

☒ Funktiolaskin / Scientific calculator   ☐ Ohjelmoitava laskin / Programmable calculator

☐ Muu materiaali, tarkennettu alla / Other material, specified below:

**Tenttiin vastaaminen / Please answer the questions:**
☒ Suomeksi / in Finnish   ☒ 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. Koulutuksen johtosääntö 18 §)

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 the Education Regulations 18 §)

**Kysymyspaperi on palautettava / Paper with exam questions must be returned:**
☒ Kyllä / Yes   ☐ Ei / No

*This test has three questions and a maximum of 90 points. 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.*

1) **Key concepts of Lean and its role in cost-based decision making.** (Brown and Tiez) (30 p.)
2) **Relating to allocation of service department costs to production cost centres. (Kaplan** and Atkinson) (30 p.)
   a. How does such internal allocation improve cost control and efficiency? (10 p)
   b. What kind of negative consequences may occur if internal service department costs are not assigned to user groups? (10 p)
   c. What are the economic insights provided by the reciprocal allocation method? (Kaplan and Atkinson) (10 p)

3) **Reapportionment of service department costs**

Downhill Products Ltd's budgeted overheads for the forthcoming period applicable to its *production* departments, are following: 860 000€ for production department P1, and 600 000€ for production department P2. The budgeted total costs for the forthcoming period for the *service* departments, are as follows: 175 000€ for Service department A, and 100 000€ for Service department B.

The use made of each of the services has been estimated as follows:

|    | Production department | | Service department | |
|----|-----|-----|-----|-----|
|    | P1 | P2 | A | B |
| A: | 60% | 20% | - | 20% |
| B: | 50% | 40% | 10% | - |

Apportion the service department costs to production departments and provide the costs of each production department:

a) using the specified order of closing method (*step-wise*),  (10p)
b) using the simultaneous equation method (*reciprocal*).  (15p)
c) Briefly describe advantages and differences of these two methods  (5p)

Please remember to show all the calculations.