

UNIVERSITY OF OSLO
DEPARTMENT OF ECONOMICS

Exam: **ECON4271 – Distributive Justice and Economic Inequality**

Date of exam: Wednesday, May 16, 2018 **Grades are given:** June 6, 2018

Time for exam: 09.00 – 12.00 noon

The problem set covers 2 pages

Resources allowed:

- No written or printed resources – or calculator - is allowed (except if you have been granted use of a dictionary from the Faculty of Social Sciences)

The grades given: A-F, with A as the best and E as the weakest passing grade. F is fail.

Question 1 (20% of the total; sub questions carry equal weight)

- i) Describe the evolution of top incomes (say highest 1% or 0.1%) as well as the inequality among the rest of income earners over the last decades.
- ii) What forces can explain these changes?
- iii) How do Aaberge, Lind and Moene (2018) study the effect of couple formation on economic inequality? Which inequality measures are best suited to undertake their type of analyses?

Question 2 (25% of the total; sub questions carry equal weight)

- i) Explain what is meant by partial and complete orderings. Give examples of partial and complete orderings used to rank income distributions with respect to social welfare and inequality.
- ii) What conditions ensure that respectively the primal and dual social welfare functions exhibit inequality aversion? What is the underlying normative principle that is used to justify inequality aversion?
- iii) Define the primal and dual measures of inequality and give an account of the most important differences between the primal and dual inequality measures.

Question 3 (25% of the total; sub questions carry equal weight)

Consider the question of how to rank infinite streams of well-being by means of a reflexive and binary social welfare relation (SWR). It is an important dilemma that such SWRs cannot be complete (and explicitly describable), while at the same time being sensitive to the interests any one or even all generations (by satisfying the conditions of strong or weak Pareto) and treating generations equally (by satisfying the conditions of strong or finite anonymity).

- i) Provide an example of a complete SWR that satisfies the strong Pareto condition.
- ii) Provide an example of a complete SWR that satisfies the strong anonymity condition.
- iii) Provide an example of an incomplete SWR that satisfies the conditions of strong Pareto and finite anonymity.

For each of your examples of SWRs, briefly discuss their suitability as criteria for intergenerational distributive justice.

Question 4 (30% of the total; sub questions carry equal weight)

- i) Arrow's "impossibility" result shows that a small number of compelling axioms are mutually inconsistent. Discuss how the Social Welfare Functional approach responds to such difficulty.
- ii) Using the axioms that characterize utilitarianism, show that the vector of utilities $u = (1, -3, 3)$ is better than $v = (2, -2, 0)$.
- iii) Show that, with ordinal full comparability of utilities, the ranking of allocations underlying u and v can be reversed.