UNIVERSITY OF OSLO
DEPARTMENT OF ECONOMICS

Exam: **ECON4620 – Public Economics**

Date of exam: Thursday, May 27, 2010 **Grades will be given: June 16, 2010**

Time for exam: 2:30 p.m. – 5:30 p.m.

The problem set covers 2 pages

Resources allowed:
- No resources allowed

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

Problem 1

a) Explain in general what it means that a tax is distortionary.

b) Explain in detail the distortions generated by a tax levied on a particular consumption commodity.

Problem 2

In a tax analysis for the Mirrlees Review the following formula appears:

$$\frac{t(z)}{1-t(z)} = \frac{1}{\eta}(1-g(z)) \qquad (*)$$

It is said to be an inverse elasticity tax rule for the participation tax rate on work where *g(z)* is the social value of marginal consumption for individuals earning *z*.

a) Explain in further detail this condition and the insights it conveys.
(You are not supposed to derive the formula.)

b) Which empirical findings are relevant when making use of $(*)$, and what do they indicate?

Please, proceed to page 2 overleaf.

Problem 3
In an article on the reading list the following optimality condition appears:

$$\sum MRS^{i}_{GX} = p + \frac{\lambda \hat{V}^{2}_{X}}{\gamma}\left[\widehat{MRS}^{2}_{GX} - MRS^{1}_{GX} \right]$$

Here *G* and *X* refer to a public and a private good, respectively, p denotes the unit cost of the public good, the superscripts denote type of individual, $\widehat{MRS}$ refers to the "mimicker", *V* is utility, and λ and γ are positive parameters.

Present the assumptions and main features of the underlying model, and explain the economic content of the condition. (You are not supposed to derive the formula.)

Problem 4
It has been argued that asymmetric information is a conceivable case for public provision of private goods. Explain this argument for some asymmetric information problem.