



AFRICAN ECONOMIC RESEARCH CONSORTIUM

**Collaborative Masters Programme in Economics for Anglophone Africa
(Except Nigeria)**

**JOINT FACILITY FOR ELECTIVES (JFE) 2011
JUNE - SEPTEMBER**

PUBLIC SECTOR ECONOMICS I

First Semester: Final Examination

Duration: 3 Hours

Date: Wednesday, August 3, 2011

INSTRUCTIONS:

1. This examination has **SIX QUESTIONS**.
 2. Each question carries **TWENTY FIVE (25)** marks.
 3. You are required to attempt **FOUR QUESTIONS** in total.
 4. Question 1 is **COMPULSORY**.
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Question 1 (COMPULSORY)

Explain in your own words and give intuitive answers and reactions to the following statements. **[3. 57 marks each]**

- (i) Preferences for publicly provided-goods *with* private alternatives are more likely to violate single-peakedness than are preferences for publicly-provided goods *without* private alternatives.
- (ii) For projects whose profiles are independent (from each other), it is appropriate to work with a benefit-cost-ratio criterion, accepting all projects that have a present value of costs/present value of losses, greater than or equal to one and rejecting those where this ratio is less than one.
- (iii) Since education yields private returns, which are fully captured by the person who makes the investment, the market will provide the optimal level of education and the government should not intervene.
- (iv) In most application, it would be straight forward to implement a contingent valuation technique. However, most politicians are not familiar with basic public economics, and they are reluctant to implement a valuation technique that they do not understand.
- (v) Majority rule always results in optimal provision of the public good.



- (vi) The ideal Pigouvian tax is usually set above the marginal social damage created by the externality.
- (vii) In most applications, hedonic pricing techniques undertake surveys to elicit information that is used in valuation.

Question 2

- (a) Briefly explain the main similarities and differences that exist between the project selection criteria that are used in the private and public spheres. **[7 marks]**
- (b) Explain and illustrate how the notion of consumer surplus is employed in the valuation of the benefits (and costs) of public investment projects. **[12 marks]**
- (c) Briefly explain the most commonly employed shadow pricing techniques for labour inputs used in public investment projects? **[6 marks]**

Question 3

- (a) Explain and illustrate how the actions of government bureaucrats can result in socially inferior results. Are these results of any relevance in explaining the patterns of public sector activity in your country? **[10 marks]**
- (b) Explain what is meant by the medium term expenditure framework. What are the major considerations that should be taken into account for its successful implementation? **[8 marks]**
- (c) Why have most societies not been successful in combating acts of corruption? **[7 marks]**

Question 4

Let two consumers have preferences described by

$$U_A = \ln F_A + \ln C_A$$
$$U_B = \ln F_B + \ln C_B$$

The endowment for A consists of 3 units of good F and 2 units of good C . Individual B has 2 units of good F and 1 unit of good C .

- (a) Calculate the consumers demand functions. **[5 marks]**
- (b) selecting good F as the numeraire, compute the market demand function for good C . **[4 marks]**



- (c) Find the equilibrium price for good C and the equilibrium levels of consumption. **[5 marks]**
- (d) Characterize all Pareto efficient allocations and show how that the market equilibrium is Pareto efficient. What are their main implications of these results? **[7 marks]**
- (e) Discuss the applicability of this ‘classic’ market economy model to the functioning of your country’s economy. **[4 marks]**

Question 5

- (a) What are the main implications of Arrow’s impossibility theorem for decision making in a direct democracy? **[7 marks]**
- (b) Explain the basic intuition of logrolling and illustrate how its application can result in improved social welfare. **[10 marks]**
- (c) To what extent are political economy considerations relevant in setting the policy agenda in your country? **[8 marks]**

Question 6

Consider an economy with two types of goods: a public good denoted G and a private good denoted z . There are just two persons. The individuals are homogenous and each individual has an income, or endowment of the private good, equal to m . The marginal cost of producing public goods is given by c . Preferences are defined by the functions $U_i = \alpha_i \ln(G) + (1 - \alpha_i) \ln(z_i)$, where $i = 1, 2$ and α_i represents the utility weight on public goods. Show and clearly explain why the level of public good provision will be insufficient if it is financed through private contributions (g_i) from the individuals. **[25 marks]**