

AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative MA Programme in Economics for Anglophone Africa
(Except Nigeria)

JOINT FACILITY FOR ELECTIVES (JFE)

JUNE – SEPTEMBER 2007

PUBLIC SECTOR ECONOMICS I

First Semester: Final Examination

Duration: 3 Hours

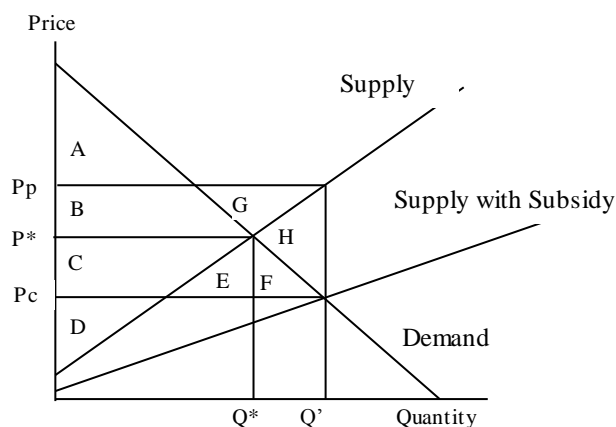
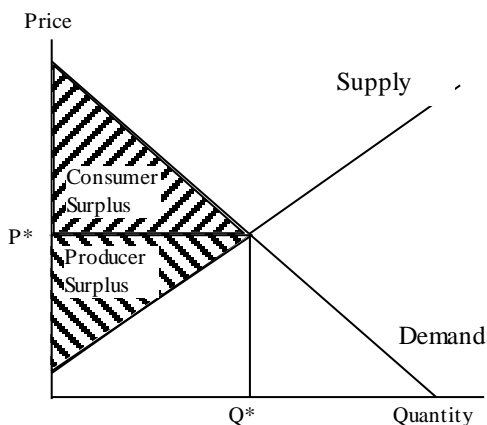
Date: Tuesday, August 7, 2007

INSTRUCTIONS:

Answer **ANY THREE (3)** Questions. All Questions Carry Equal Marks.

Question 1

- (a) Discuss the inter-temporal Pareto efficiency conditions for the allocation of resources in an economy and their linkages to saving and investment behaviour. **(10 marks)**
- (b) Consumer and producer surpluses are useful tools for analyzing the welfare effects of government policies. Utilize the figures below to analyse the welfare effects of a government subsidy given to promote the supply of a product. **(10 marks)**



Question 2

- (a) Outline the **five** traditional functions of the public sector in an economy and expound on the shortcomings of utilizing the “market failures” approach to defining the role of the public sector. **(10 marks)**
- (b) A recent Nobel Prize in Economics takes cognizance that market failures should be broadly defined to incorporate the role of information asymmetries. Discuss this source of market failures drawing on examples from the works of the award winners - Akerlof (“market for lemons”); Stiglitz (“credit rationing”); and Spence (“signaling”). **(10 marks)**

Question 3

- (a) Carefully define and distinguish (i) technological externalities; and (ii) pecuniary externalities. **(10 marks)**
- (b) Assume that a factory is erected in an area. In the process of producing output X, however, the factory emits smoke pollution which has adverse health effects on the surrounding population. As an advisor to the government on this project, compare and contrast the Pigouvian and the Coase remedies to the internalization of this externality. **(10 marks)**

Question 4

- (a) The problem of designation of incentive-compatible mechanisms for determining the optimal supply of public goods and individual contributions (tax shares) is not straight forward. However some mechanisms do exist. Analyse the Clarke Groves public goods demand revelation mechanism, the most popular in the public economics literature. **(10 marks)**
- (b) Explain as well (i) the Vernon Smith auction mechanism; and (ii) the veto voting mechanism for public goods demand revelation. **(10 marks)**

Question 5

- (a) Explain the advantages and disadvantages of (i) the net present value; (ii) internal rate of return; and (iii) benefit-cost ratio criteria in project selection. **(10 marks)**
- (b) Suppose you have been asked to undertake a social cost-benefit evaluation of a road project. Discuss how you would proceed to derive (i) the social rate of discount (including why it is expected to be lower than its private counterpart); (ii) savings on traveling time; and (iii) reduced accidents, saving lives. **(10 marks)**