



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2016/2017
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF ECONOMICS
EAE 313: PUBLIC FINANCE

DATE: WEDNESDAY 23RD NOVEMBER 2016

TIME: 4.30 P.M. - 6.30 P.M.

INSTRUCTIONS

- A) The private marginal Benefit (PMB) for cassava is given by $30-3X$, where X is the number of cassava consumed. Private Marginal Cost (PMC) of producing cassava is the same at 15 shillings. For each cassava produced, external cost of Kshs. 6 is imposed on members of Nairobi village.

REQUIRED:

- i). Without government intervention, how much of cassava is produced? (6marks)
- ii). What is the efficient level of cassava production? (4marks)
- iii). What is the gain to society involved in moving from the inefficient to efficient level of production? (3marks)
- iv). Suggest a pigouvian tax that would lead to efficient level of production. (2marks)
- v). How much revenue would the tax raise? (3marks)

B) Explain using illustrations and relevant examples (where applicable) the following economic concepts as used in public finance:

- i). Free-rider problem (3marks)
 - ii). Fiscal externalities (3marks)
 - iii). Zero base budgeting (3marks)
 - iv). Canon of tax elasticity (3marks)
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Question 2

A) A steel producing firm has a demand function given as $P = 30 - Q$. the cost function facing the firm is given as and $C = 200 + Q^2$. This firm emit its waste into a river and it cost the fish farmers $C = 20 + 2.5Q^2$ to clean the river.

Required

- i) Market Competition equilibrium price and quantity (3 marks)
 - ii) Socially efficient equilibrium price and quantity (3 marks)
 - iii) Amount of Corrective [Pigovian] tax per unit (4 marks)
- B) Explain giving relevant examples why public debt is incurred. (10 marks)

Question 3

A) The government of Kenya desires to construct a Southeastern bypass road to ease congestion in that area. It conducts a survey that entailed three groups of individuals and came up with three demand equations as given below:

$$\text{Group1: } D_1 = 20 - 0.2P_1$$

$$\text{Group2: } D_2 = 35 - 0.5P_2$$

$$\text{Group3: } D_3 = 40 - 0.8P_3$$

Where D is the size of the road and P is group contribution.

If the cost of constructing the road is 5 billion;

- i) Explain why the road may not be constructed (5 marks)
 - ii) What is the optimal size of the road to be constructed (5 marks)
 - iii) Determine each group contribution (5 marks)
- B) Explain any five alternatives to taxation and clearly state why they are not a proper substitute to taxation (5 marks)

Question 4

- A) Discuss the main limitations of Cost Benefit Analysis as a principle basis of appraising public projects. (10 marks)
- B) Recently most governments in the East African community are using sovereign debt rather than taxation. While using relevant examples from any East African nation discuss the circumstances under which debt is preferred to taxation. (10 marks)

Question 5

- A) Using illustrations discuss the provision of social goods and private goods (10 marks).
 - B) Using relevant examples demonstrate the extent to which the ability to pay principle is effective in achieving macroeconomic policy objectives compared to the benefit principle (10 marks)
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