



**National University of
Science and Technology**
Think in Other Terms



**FACULTY OF COMMERCE
DEPARTMENT OF FINANCE
BACHELOR OF COMMERCE HONOURS DEGREE IN FINANCE &
BACHELOR OF COMMERCE HONOURS DEGREE IN FISCAL STUDIES
PII – 2nd SEMESTER SUPPLEMENTARY EXAMINATION – JUL/AUG 2014
ECONOMICS OF TAXATION [CFS 2203]
TIME ALLOWED: THREE (3) HOURS**

INSTRUCTIONS TO CANDIDATES

- 1) Answer and any **FOUR (4)** questions
- 2) Start the answer to each full question on a fresh page of the answer booklet.
- 3) All rough work must be crossed out and attached to the end of the answer booklet.
- 4) Read questions carefully and address all parts of the question.
- 5) Questions may be written in any order, but must be legibly numbered.

ADDITIONAL INFORMATION FOR CANDIDATES

- 1) The paper contains SIX (6) questions.
- 2) Marks for each question are shown in parentheses brackets () and square brackets [] at the end of each part of the question and full question respectively.
- 3) All other questions carry equal marks [25 marks].

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QUESTION ONE

- a) Designing a new tax system is a different process from changing an existing one to a different approach. Discuss this issue in the context of a move from an income tax to a consumption based tax.
- b) How the design of a tax system would differ from a developed to a developing economy and are there common themes as well?
- c) How would potential avoidance and evasion activities impact the design of a tax system?
- d) Economists often concentrate on issue of economic efficiency in analyzing tax systems. What other factors might impact real world tax decision-making in addition to efficiency?

QUESTION TWO

- a) The Haig-Simons approach is widely used as a guide for defining income. What would be the administrative problems in attempting to use this approach in the real world? Why might people disagree with the use of the Haig-Simons definition?
- b) Discuss the options that might be available to reduce the inefficiency from taxation? How might these approaches impact equity issues?
- c) Potential mobility of the tax base is an important issue in the economy for both local taxation and international taxation. Explain how this may impact decision-making in regard to tax policy.

QUESTION THREE

- a) Given the current budgetary constraints in Zimbabwe, the government needs to raise money, and the Ministry of Finance has a choice of imposing an excise tax of the same amount on one of two previously untaxed goods: the government can tax sales of either airline fares or fuel. Both the demand for and the supply of airline fares are more elastic than the demand for and the supply of fuel.
 - (i) If the Ministry wants to minimize the deadweight loss caused by the tax, which good should be taxed? **(4 marks)**
 - (ii) For each good, draw a diagram that illustrates the deadweight loss from taxation. **(2 marks)**
- b) The government eventually decided to impose an excise tax on the sale of all airline tickets. Before the tax was imposed, 3 million airline tickets were sold every year at an average price of \$500. After the tax is imposed, only 1.5 million tickets are sold yearly; travellers pay \$550 per ticket, \$450 of which the airlines receive. Using illustrative diagrams, determine:

- (i) Whether the incidence of the tax falls more heavily on consumers or producers, **(6 marks)**
- (ii) Why government revenue raised from the tax is not a good indicator of the true cost of the tax, and **(3 mark)**
- (iii) How much deadweight loss (excess burden) of the tax arises as a result of the tax? **(10 marks)**

QUESTION FOUR

- a) Distinguish between excess burden of a tax and incidence of a tax. **(2 marks)**
- b) The annual demand and supply of maize for a small village are given by the following equations respectively:

$$Q_d = 500\,000 - 20\,000p \text{ and } Q_s = 30\,000p$$

Where p is the price per tonne and, Q_d and Q_s are quantities demanded and supplied per year.

- i) Solve for the equilibrium annual quantity and price of maize. **(2 mark)**

Suppose a unit tax of \$2 is levied on maize which results in gross price paid by buyers rising to \$11.50, net price received by sellers reducing to \$9.50 and quantity reducing to 200 000 tonnes. Use both graphic and algebraic techniques to show the impact of the tax on the market equilibrium by calculating and commenting on each of the following tax parameters:

- ii) Excess burden of the tax. **(8 marks)**
- iii) The amount of tax collected per year. **(1 marks)**
- iv) Efficient-loss ratio of the tax **(4 marks)**
- v) Tax incidence of the tax **(8 marks)**

TOTAL [25 MARKS]

QUESTION FIVE

- a) Discuss methods that a local government can use to maximize the following sources of local taxes.
- i. Land tax **(5 marks)**
 - ii. User charges **(12 marks)**
- b) Critically justify the adoption of user charges as the main technique for collecting revenues for most of the local government provided goods and services. **(8 marks)**

[TOTAL 25 MARKS]

QUESTION SIX

Assume a small village in Muvhango District has only 10 households with following annual incomes of families as shown on the left hand side of the table below. As a measure of reducing discrepancies among families' incomes and

achieve the government goal of income redistribution, the government tax authority introduced a progressive tax structure with tax brackets on annual incomes as shown also on the same table on its right hand side.

Families and Income		Tax Structure		
Family Name	Annual Income		Tax Bracket	Average Tax Rate
Nare	14000		0-5000	0%
Ncube	10000		5001-10000	10%
Ndou	3000		10001-15000	15%
Nguluvhe	12000		15001-20000	20%
Nyathi	18000		20001-30000	25%
Mbedzi	9000		+30000	30%
Moyo	25000			
Muleya	2500			
Sibanda	8000			
Singo	32000			

- Use the Lorenz Curve and the Gini Coefficient to determine the level of equality of income distribution before imposing a tax (Hint: use 5 quartiles). **(10 marks)**
- Use the Lorenz Curve and Gini Coefficient to determine the level of equality of income distribution after the new tax system. **(12 marks)**
- Based on your answers in (a) and (b) above, explain how a tax system can be utilised to improve the distribution of income in the economy. **(3 marks)**

TOTAL [25 MARKS]

END OF EXAMINATION PAPER