Ref. No. EX/PG/ECO/38/63/2018

M.A. 2nd Year Third Semester Examination 2018
Subject: Economics
Paper: Public Economics1

Time: ...2. Hours **Full Marks 30**

Answer any five questions: 6×5=30

1. How would you measure social cost of public fund? Argue that in a many commodity economy lower excess burden can be achieved through tax smoothing. 3 + 3 = 6

2. a. Argue that the measure of "leakage in government revenue" underestimates the efficiency loss due to taxation.

   b. Explain how one would measure the efficiency loss due to taxation in a general equilibrium framework. 2 + 4 = 6

3. Show that the general equilibrium incidence of taxing all the inputs of production of a commodity is the same as taxing the output at the same rate. 6

4. a. Derive the Ramsey rule of optimum commodity taxation in a one-person economy.

   b. Suppose the individual's utility function takes the following form:

   $$U = \sum_{i=1}^{2} a_i \log x_i + A \log(1 - L)$$

   where $a_1 + a_2 + A = 1$. How do you compare the tax rates? Explain your answer.

   4 + 2 = 6

5. Differentiate between exemption and zero-rating of a commodity in a Value-Added-Tax (VAT) system. If a government decides to extend favorable tax treatment to a commodity, which one of the two instruments, exemption and zero-rating would be preferred and why?

   3 + 3 = 6

6. Explain why an optimum income tax schedule should not accommodate negative marginal tax rate. 6

7. Consider the income tax function: $T(z) = az + bz^2 - c$ with $a > 0, b > 0$ and $c > 0$.

   a. Is this tax function progressive, regressive or proportional? 2

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b. Assuming a consumer of skill s has his/her utility function given as $U = x - l^2$ find out the income level (z) of the consumer that maximizes his/her utility given the tax function $T(z)$specified above. 2

c. Is $T(z)$ an optimum income tax function? Justify your answer. 2