

**Name:**  
**Enrolment No:**

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**  
**End Semester Examination (Online) – December, 2021**

**Program: MA Economics**  
**Subject/Course: Public Economics-II**  
**Course Code: ECON 8010**

**Semester: III**  
**Max. Marks: 100**  
**Duration: 3 Hours**

Q.No.	<p align="center"><b>Section A</b>  <b>(Type the Answers in test box)</b></p>	10Q×2M=20M	COs
	Question	Marks	COs
1	A tax imposed on a commodity according to its weight, size, and measurement is called (a) Double taxation (b) Specific tax (c) Single tax (d) Advalorem tax	2	CO 1
2	According to Peacock and Wiseman’s analysis, public expenditure increases (a) As time passes (b) In jerks or step like fashion (c) The short and long runs (d) In smooth and continuous manner	2	CO 1
3	The proposed GST bill will subsume: (a) Entertainment tax (b) Value added tax (c) Union excise duty (d) All of the above	2	CO 1
4	By ‘financial crowding out’ economists mean a) What the government borrows cannot be used for private investment. b) Government borrowings drive up the interest rate c) Credit rationing d) Reserve Bank of India controls on commercial bank lending’s	2	CO 1
5	Progressive tax is one where the tax incidence a) Grows at the same rate as that of the tax base b) Grows at higher rate than that of the tax base c) Grows at lower rate than that of the tax base d) Remains independent of that of the tax base	2	CO1

6	Which of the following is a sumptuary tax a) Wealth tax b) Capital gains tax c) Pollution tax d) Road tax	2	CO1
7	With multiple-peaked preferences, a) a unique political equilibrium does not exist. b) all individuals have a point that is most preferred. c) the law of transitivity is violated. d) all of these answer options are correct.	2	CO1
8	Tax Dead-weight loss is the same as a) Welfare cost to the society b) Compliance cost of the tax payer c) Administrative cost d) Political cost involved	2	CO1
9	A tax is said to be buoyant if tax revenue is proportionally: (1) More responsive to changes in output. (2) Less responsive to changes in output. (3) Equally responsive to change in tax base (4) Less responsive to changes in tax base	2	CO1
10	Proportional adjustment method refers to a) Measurement of tax buoyancy b) Inflation effect on tax revenue c) Measurement of tax elasticity d) Equity effect of tax	2	CO1
<b>Section-B</b>			
<b>Q.No.</b>	<b>(Scan and upload)</b>	<b>4Q×5M=20M</b>	
1.	Max has a utility function $U(x, y) = 2xy + 1$ . The prices of x and y are both \$1 and Max has an income of \$20. a) How much of each good will he demand?  b) A tax is placed on x so that x now costs Max \$2 while his income and the price of y stay the same. How much of good x does he now demand?  c) Would Max be as well off as he was before the tax if when the tax was imposed, his income rose by an amount equal to \$1 times the answer to part (b)?	5	CO 2

Refer to Table 7.1 below. By what percentage does real annual expenditures in public elementary and secondary schools rise between 1980 and 1985? Between 2005 and 2010? What can be said about the rate of change?

**Table 7.1** Real Annual Expenditure per Pupil in Public Elementary and Secondary Schools (Selected years)

School Year	Expenditure per Pupil (2010 dollars)
1980	\$ 5,762
1985	6,461
1990	7,995
1995	7,917
2000	8,752
2005	9,838
2010	10,615

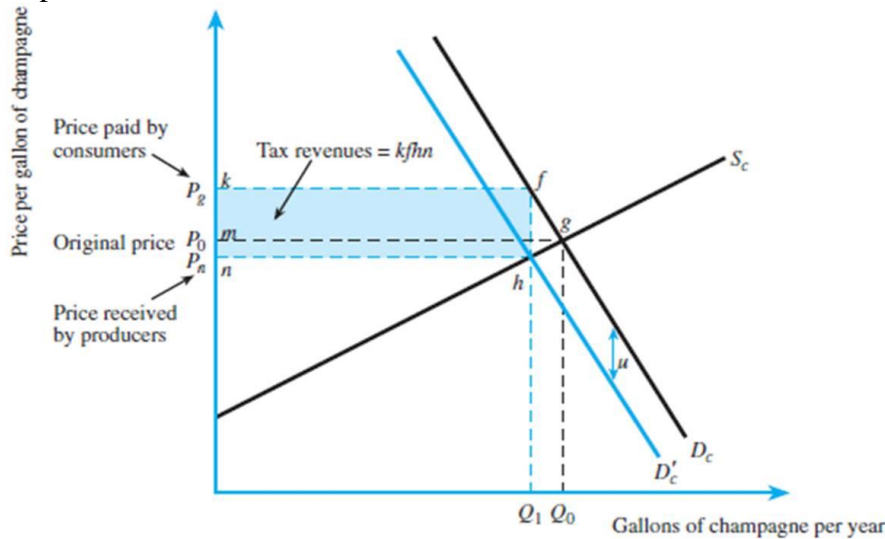
Source: US Bureau of the Census [2012c, p. 8].

2.

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Refer to the figure below. Suppose the original before-tax demand curve for CD players is  $P = 100 - 2Q_d$ . Suppose further that supply is  $P = 5 + 3Q_s$ . Now suppose a \$5 unit tax is imposed on consumers



3.

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- (A) What is the before-tax equilibrium price and quantity?
- (B) What is the after-tax equilibrium price and quantity?
- (C) How much tax revenue is raised?

4.

5

CO  
3

Suppose that you have two people in an economy, Ms. Hundley and Mr. McKenna, who want to produce a public good  $S$ . Suppose we calculate the Lindahl equilibrium using the method in your textbook. In this case, the demand curve for Ms. Hundley is  $S = P^{1/2}$ . The demand curve for Mr. McKenna is  $S = 8/P$ . If the marginal social cost of the project is 10, what is the Lindahl equilibrium quantity of  $S$ ? What are the Lindahl prices?

Q.No.	Section-C (Scan and upload)	3Q×10M=30M	
1	What are factors, which affect the growth of public expenditure? Analyze in the context of theory given by R Bird.	10	CO 3
2	Prove that change in the ratio of government debt to GDP is (Total deficit/GDP) minus the product of (Debt/GDP) and growth rate of nominal GDP.	10	CO 3
3	The government has hired you to advise them on the merits of a project that is being proposed. The project is expected to generate benefits of 14 million dollars today, 5 million dollars in one year from today, and 1 million dollars in two years from today. (These are the only years of concern.) The project costs nothing today, but will cost 20 million dollars in two years. Assume the interest rate is 10%. If the benefit-cost ratio is greater than 1, the project should be allowed. What is your policy suggestion?	10	CO3
Q.No.	Section-D (Scan and upload)	2Q×15M=30M	
1	Suppose that demand is perfectly inelastic. Supply is normal and upward sloping. What is the economic incidence of a unit tax placed on suppliers? Illustrate this with an appropriate diagram.	15	CO4
2	<p>Compute the total VAT liability using both ‘Subtraction’ method and ‘Tax credit-invoice’ method, and examine if the VAT liability computed by ‘Subtraction’ method is the same as that computed by the ‘Tax credit – invoice’ methods, – under the following cases (Show the results in separate tables):</p> <ol style="list-style-type: none"> <li>Normal VAT: (No exemption, No zero-rating). VAT rate is uniform for all commodities at 10%.</li> <li>Normal VAT: (No exemption, No zero-rating). VAT rates differ: 4% on wheat, 6% on flour and 8% on bread.</li> <li>The commodity bread is zero-rated. VAT rate is uniform for all other commodities at 10%.</li> <li>The commodity bread is zero-rated. VAT rates differ: 4% on wheat, 6% on flour and 0% on bread.</li> </ol> <p style="text-align: center;">OR</p>	15	CO4

How increase in public expenditure will affect the economic growth? Explain.