S5 Economics Practice Paper 1 | Elasticity, PPF, market equilibrium, GDP, CPI, unit tax

Senior Secondary Economics

S5 Economics practice paper with answers: price elasticity and total revenue, PPF, market equilibrium, price ceilings, GDP growth, CPI and unit tax incidence. 100 marks.

1. Price elasticity of demand and total revenue (16 marks)

Show working in all parts.

#	Question
1	(a) A good's price falls from $20 to $16 and quantity demanded rises from 200 to 260 units. Using the percentage method, find the price elasticity of demand (absolute value).
2	(b) Referring to (a), is demand elastic or inelastic? How does total revenue change after the price cut?
3	(c) Another good's price rises from $10 to $12 and quantity demanded falls from 500 to 450 units. Find the absolute elasticity.
4	(d) Referring to (c), how does total revenue change? What does this show about elasticity?

2. Production possibility frontier and opportunity cost (18 marks)

Parts (a) to (c) are short answers; explain with working in (d).

#	Question
5	(a) An economy produces only goods X and Y. Moving from (X 0, Y 100) to (X 20, Y 90), find the opportunity cost of one more unit of X.
6	(b) Moving on from (X 20, Y 90) to (X 40, Y 70), find the marginal opportunity cost in units of Y.
7	(c) The opportunity cost rises from 0.5 to 1. Describe the shape of the frontier and explain why.
8	(d) Technical progress raises the maximum output of Y from 100 to 120 (X unchanged). Find the opportunity cost of one unit of X from (X 0, Y 120) to (X 20, Y 108), and state how the frontier shifts.

3. Market equilibrium and price ceiling (16 marks)

Demand Qd = 120 - 2P, supply Qs = 3P - 30; show working throughout.

#	Question
9	(a) Find the equilibrium price and quantity.
10	(b) The government imposes a price ceiling of $25. Find the shortage.
11	(c) If the ceiling were $35 instead, what happens to the market?
12	(d) Find the consumer surplus at equilibrium, given the highest willingness to pay is $60.

4. Gross domestic product and economic growth (18 marks)

Show working in (a) to (c); explain in (d).

#	Question
13	(a) A place's nominal GDP rises from 200 billion to 220 billion dollars while the price index rises from 100 to 110. Find this year's real GDP at base-year prices.
14	(b) Find the real growth rate for the year.
15	(c) Population rises from 5.0 million to 5.2 million. Find real GDP per head at the start and at the end (to the nearest dollar).
16	(d) Nominal GDP rose 10%% while real growth was zero. Explain and find the inflation rate.

5. Consumer price index and inflation (16 marks)

A consumption basket has 40 units of food and 20 units of housing; the base year index is 100.

#	Question
17	(a) In the base year food costs $10 a unit and housing $30 a unit. Find the base-year basket cost.
18	(b) This year food costs $11 and housing $33 a unit. Find this year's basket cost.
19	(c) With the base year at 100, find this year's consumer price index.
20	(d) The nominal wage rises from $20,000 to $21,500. Find the percentage change in the real wage.

6. Unit tax and tax incidence (16 marks)

Before tax, Qd = 100 - 2P and Qs = 2P - 20. The government levies a unit tax of $6 on producers.

#	Question
21	(a) Find the equilibrium price and quantity after the tax.
22	(b) Find the price producers actually receive per unit.
23	(c) Find the government's total tax revenue.
24	(d) Find the pre-tax equilibrium price and the share of the tax borne by consumers.