2.1 Demand, supply, equilibrium and elasticity

Name: _____ Class: _____ Date: _____ **Total: 23 marks**

KEY WORDS price elasticity of demand • equilibrium

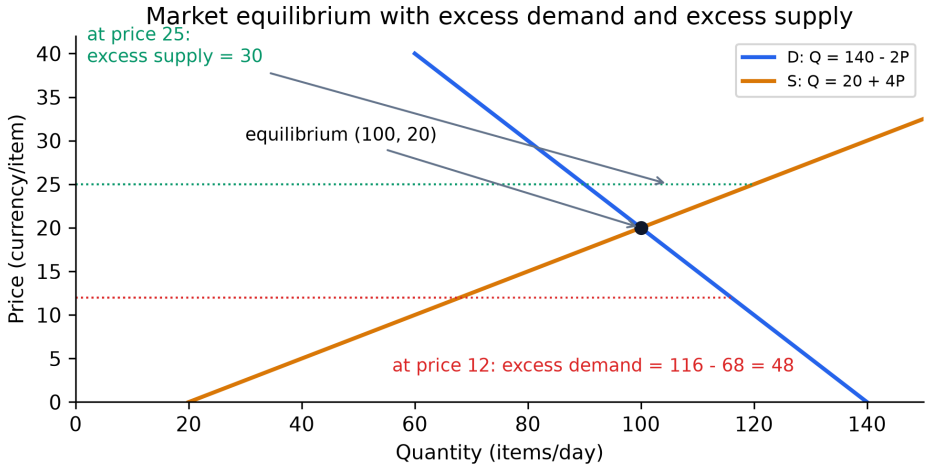
Demand, supply, equilibrium and elasticity

Objective

Apply movements versus shifts, equilibrium and disequilibrium arithmetic, and the PED, PES and YED formulae with the total-revenue test (spec 1.1.3–1.1.4). Model: $Q_d = 140 - 2P$, $Q_s = 20 + 4P$.

1 Key knowledge and worked examples

Markets and elasticities. Equilibrium: $140 - 2P = 20 + 4P \rightarrow$ P = 20, Q = 100. At P = 12: excess demand = 116−68 = 48; at P = 25: excess supply = 120−90 = 30. PED = $\%\Delta Q_d \div \%\Delta P$ (20→22 gives −0.4, inelastic; TR 2000 → 2112 rises). PES = $\%\Delta Q_s \div \%\Delta P$ (20→24 gives +0.8). YED: +10% income, +8% quantity → +0.8, normal necessity.



Original model; both excesses are computed in the solutions.

2 Practice

2.1 Define demand and state whether a fall in the good's own price shifts or moves along its demand curve. [2]

2.2 Name any four factors that shift the demand curve. [2]

2.3 Name any three factors that shift the supply curve. [2]

2.4 Solve the model's equilibrium price and quantity. [2]

2.5 At P = 12, calculate the excess demand. [2]

2.6 At P = 25, calculate the excess supply. [2]

3 Exam-style questions

3.1 *(Original.)* The price rises from 20 to 22 and quantity demanded falls from 100 to 96. Calculate PED and use the total revenue test to classify demand over this range. [4]

3.2 *(Original.)* The price rises from 20 to 24 and quantity supplied rises from 100 to 116. Calculate PES, interpret it, and explain why the PES of fresh strawberries is lower than the PES of tinned strawberries. [4]

3.3 *(Original.)* Incomes rise 10% and the quantity of bus travel demanded falls 4%. Calculate YED and classify the good; state what happens to demand for bus travel in a recession. [3]