

Learn these by heart before the exam.

Basic Economic Concepts

Opportunity cost: the next-best alternative given up; the real cost of every choice
PPC: bowed out means increasing opportunity cost (resources are not equally suited). A straight *PPC* means constant.
Comparative advantage: lower opportunity cost; it, not absolute advantage, determines who should specialise

Marginal analysis: do it while marginal benefit exceeds marginal cost. Optimum is $MB = MC$.

Supply and Demand

Demand shifters: income, tastes, prices of related goods, expectations, number of buyers. A *PRICE* change moves *ALONG* the curve.
Supply shifters: input prices, technology, taxes/subsidies, expectations, number of sellers.
 $E_d = \frac{\% \Delta Q_d}{\% \Delta P}$ $|E_d| > 1$ elastic, < 1 inelastic; ignore the minus sign when classifying
Elastic demand: a price cut *RAISES* total revenue.
Inelastic: a price rise raises it.
 $E_{XY} = \frac{\% \Delta Q_X}{\% \Delta P_Y}$, $E_i = \frac{\% \Delta Q}{\% \Delta \text{income}}$ cross positive means substitutes, negative means complements; income negative means inferior
Consumer surplus is under demand and above price; *producer surplus* is above supply and below price.
A price *CEILING* below equilibrium causes shortage; a price *FLOOR* above it causes surplus. Both create deadweight loss.
Tax incidence falls more on the *INELASTIC* side. Elasticity, not the law, decides who pays.

Production, Cost, and Perfect Competition

$MP = \frac{\Delta Q}{\Delta L}$, $AP = \frac{Q}{L}$ diminishing marginal returns begin when MP starts to fall
 $ATC = \frac{TC}{Q}$, $AVC = \frac{VC}{Q}$, $MC = \frac{\Delta TC}{\Delta Q}$
MC cuts *ATC* and *AVC* at their *MINIMUM* points. That is not a coincidence: it is what pulls an average down.
Profit max at $MR = MC$ for *EVERY* firm structure. For perfect competition $P = MR = D$.
Shut down in the short run if $P < AVC$. Exit in the

long run if $P < ATC$.
Long-run perfect competition: entry drives economic profit to *ZERO*; $P = MR = MC = \min ATC$.
Allocatively AND productively efficient.
Accounting profit ignores implicit costs; *economic profit* subtracts them. Zero economic profit is normal profit.

Imperfect Competition

Monopoly: one seller, barriers to entry, price maker. *MR* lies *BELOW D* and falls twice as fast.
Monopoly is allocatively inefficient: $P > MC$ creates deadweight loss. It can keep long-run profit because entry is blocked.
Perfect price discrimination: charge each buyer their willingness to pay. No deadweight loss, no consumer surplus, output equals the competitive level.
Monopolistic competition: many firms, differentiated products, free entry. Long run: zero profit, but $P > MC$ and excess capacity.
Oligopoly: few firms, interdependent. *Game theory:* find each player's best response, then the Nash equilibrium (neither wants to switch alone).
Dominant strategy: best whatever the rival does. It may not exist; a Nash equilibrium can still.

Factor Markets

$MRP = MP \times P$ the firm's demand curve for labour
Hire while $MRP > MRC$; stop where $MRP = MRC$. In a competitive labour market *MRC* equals the wage.
Monopsony: one buyer of labour. *MRC* lies *ABOVE* the supply curve, so it hires *FEWER* workers at a *LOWER* wage than competition.
 $\frac{MP_L}{P_L} = \frac{MP_K}{P_K}$ for profit maximisation each ratio also equals $1/MR$

Market Failure and the Role of Government

Negative externality: *MSC* above *MPC*, market *OVER*-produces. Correct with a per-unit tax equal to the external cost.
Positive externality: *MSB* above *MPB*, market *UNDER*-produces. Correct with a subsidy.
Public good: non-rival and non-excludable. Free riding means the market under-supplies it.
Common resource: rival but non-excludable; hence the tragedy of the commons.

Lorenz curve and the *Gini coefficient* measure income inequality: 0 is perfect equality, 1 perfect inequality.

Exam technique

Label EVERYTHING: axes, curves, equilibrium price and quantity, and shade the area you name (*CS*, *PS*, *DWL*).
Say the direction and the reason: 'demand shifts right because incomes rose and the good is normal'.
Correctly-labelled-diagram marks are free marks. Draw *MR* below *D* for any price maker, and put *MC* through the minimum of *ATC*.