Solutions

Marking: **K** knowledge, **App** use of the case or data, **An** analysis (a chain of reasons: cause, then effect), **Ev** evaluation (a judgement with a reason). In calculations, **M1** is for the method and **A1** for the answer; **B1** is an independent mark.

Each answer shows the steps, then the **result**.

2.1

(a) public good; (b) positive externality (also a merit good)

(c) information asymmetry; (d) negative externality

2.2

non-excludable: people who do not pay still see it, so few pay (free riders)

non-rival: one person watching does not reduce what others see, so charging makes no sense

2.3

market: $50 - Q = 10 + Q$: $Q = \mathbf{20}$

$MSC = 20 + Q$; social: $50 - Q = 20 + Q$: $Q = \mathbf{15}$

2.4

(a) a tax per unit of pollution, a limit, or tradeable permits

(b) a subsidy for training places

3.1

(a) $30 - 0.05Q = 6 + 0.03Q$: $Q = \mathbf{300}$, $P = £\mathbf{15}$

(b) $MSC = 10 + 0.03Q$; $30 - 0.05Q = 10 + 0.03Q$: $Q = \mathbf{250}$, $P = £\mathbf{17.50}$

(c) $\frac{1}{2} \times 4 \times 50 = £\mathbf{100}$ a week

(d) £4 per tonne; revenue $4 \times 250 = £\mathbf{1{,}000}$ a week

3.2

4–5: firms under-train because other firms gain from the skills: a positive externality (K)(An); the subsidy lowers the cost of training so firms train closer to the social optimum (An); risks: the right size is unknown; some firms would have trained anyway, so money is wasted; it costs taxes (Ev); judgement, e.g. worth it if tied to completed qualifications (Ev). **2–3**: the externality explained, weak evaluation. **1**: a relevant point.

3.3

(a) $\dfrac{600}{2{,}000} = \mathbf{30}\%$; revenue $3 \times 1{,}400 = £\mathbf{4{,}200}$ a day

(b) each driver ignores the delay they add for others (a negative externality); the charge adds that cost to the private cost; only trips worth more than £3 are made, so traffic falls towards the social optimum

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(c) e.g. the charge: it keeps trips that are worth the cost, while the ban stops even urgent deliveries(Ev); risk: £3 may not equal the true external cost, or the revenue may be spent badly; check by measuring travel times after 3 months