Solutions

Marking: **K** = knowledge, **App** = using the data or case, **An** = analysis (explaining each step: cause, then effect), **Ev** = evaluation (a judgement with a reason). In calculations, **M1** is for the method and **A1** for the answer. Longer answers are marked in levels: the top level needs clear analysis **and** a judgement with a reason.

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

2.1

- tax \$15
- new cost $40 + 15 =$ **\$55**

2.2

- 200×30
- **\$6000**

3.1

- a merit good, such as education, has external benefits, so the market provides too little (K)
- a subsidy lowers firms' costs, shifting supply to the right (An)
- the price falls and quantity rises towards the social optimum (An)

3.2

Any three (K each): poor information about costs and benefits; unintended effects of a policy; high administration costs; political aims that differ from the public interest; firms or groups influencing decisions; time lags

3.3

- the maximum rent is below the equilibrium, so it is the legal price (K)
- at the lower rent more people want to rent: quantity demanded rises (An)
- landlords offer fewer homes: quantity supplied falls (An)
- quantity demanded is greater than quantity supplied, so there is a shortage; queues, lower quality or illegal deals may follow (An)

3.4

(a) $60\,000 \times 10$; **\$600 000**

(b) points to include:

- driving creates external costs: pollution and delays for others; MSC is above MPC (K)
- drivers ignore these costs, so too many cars enter the centre (An)
- the charge raises the private cost of driving, shifting MPC up towards MSC (An)
- fewer cars enter, so pollution and delays fall towards the social optimum (An)
- diagram: MPC, MSC, demand; output falls from Q_1 to Q^* (An)

Levels: **top** (5–6) clear analysis, each step explained, with a correct diagram; **middle** (3–4) some analysis, or a diagram with little explanation; **bottom** (1–2) relevant points, little explanation.

(c) points to include:

- for: it makes drivers pay for the external cost; car numbers fell by a quarter (App)
- the revenue can pay for public transport, giving people another choice (An)
- against: demand may be price inelastic for people who must drive, so pollution falls only a little (An)
- it is regressive: it takes a larger share of income from low-income drivers (An)
- other policies: regulation of emissions, subsidies for electric cars or buses, low-emission zones (An)
- judgement: effective if combined with good public transport and set at the right level; regulation of the dirtiest vehicles may cut pollution more directly (Ev)

Levels: **top** (9–12) clear analysis of both sides and a conclusion with reasons that answers the question; **middle** (5–8) analysis of both sides with limited evaluation, or one side well; **bottom** (1–4) relevant points, mostly descriptive.