Solutions

Economics answers are marked by **level of response** against the assessment objectives: award **AO1** knowledge, **AO2** application, **AO3** analysis and **AO4** evaluation.

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

2.1

- a cost of production or consumption that falls on a third party, not the buyer or seller (2 for a clear definition; 1 for a partial idea)

2.2

- marginal social benefit is greater than marginal private benefit (1)

2.3

- the loss of welfare (consumer plus producer surplus) when output is not at the socially optimum level (2 for a clear definition; 1 for a partial idea)

3.1 B

- The social optimum is where MSC = MSB

3.2

- *[8]* AO1 1 + **AO3 diagram up to 4** (MPB, MSB above it, MPC; market output where MPC = MPB, optimum where MSC = MSB; welfare-loss triangle) + AO2/AO3 up to 3 — buyers consider only their private benefit, so the market produces where MPC = MPB; but the true social benefit is higher, so the optimum is greater
- the good is under-produced and welfare is lost

3.3

- *[12]* AO1/AO2/AO3 up to 8 (diagram + policies) + AO4 up to 4. **Options:** a tax on fuel/congestion (internalises the cost but is regressive and inelastic), regulation (emissions limits — effective but hard to enforce), subsidising public transport (switches demand but is costly), tradable permits. Judgement: a mix usually works best — a tax plus better public transport — the best policy depends on the price elasticity of demand for car use and the ability to enforce it