Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

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

2.1

mitigation: reducing greenhouse gas emissions or removing them from the air, e.g. solar power, reforestation; adaptation: changing how we live to reduce harm from climate change, e.g. sea walls, drought-resistant crops

2.2

award [1] for every two correct: M: solar farm, carbon tax, planting forests; A: sea wall, drought-resistant maize, flood early-warning system

3.1

(a) burning fossil fuels becomes more expensive; so firms and consumers switch to low-carbon energy, use less energy and invest in efficiency

(b) any two: raises prices of fuel and goods, hitting poorer households hardest; firms may move to countries without the tax (carbon leakage); job losses in coal and heavy industry

3.2

(a) any two: raised houses or homes on stilts; embankments and cyclone shelters; flood and cyclone warning systems; salt-tolerant rice; floating gardens

(b) adaptation does not reduce the cause, so warming and its impacts keep growing; there are limits, e.g. walls cannot hold back very high sea levels and some land will be lost; adaptation is costly and poorer countries cannot afford enough of it, so emissions must also be cut (mitigation)

3.3

award up to [5]: strengths: nearly every country takes part, rich and poor; clear goal of well below 2 °C, aiming for 1.5 °C; targets reviewed and raised every five years; weaknesses: targets are set by each country and not legally enforced; current pledges still lead to about 2.5–3 °C; the USA has left it twice; conclusion: a useful framework that depends on countries raising and meeting their targets