Q21 — Define 'profit' (Extract B, line 9) [3 marks]

Profit is the difference between a firm's total revenue and its total costs. It represents the financial reward to a firm for producing goods or services after all costs have been paid.

Q22 — Weekly saving from showers instead of baths [4 marks]

A bath uses 80 litres of water and a shower uses half as much, which is 40 litres.
Water saved per person per day = 80 − 40 = 40 litres.

For a family of four:
40 litres × 4 = 160 litres saved per day.

Over one week:
160 × 7 = 1,120 litres saved.

Cost per litre = 0.4p.
Money saved = 1,120 × 0.4p = 448p = **£4.48 per week**.

Q23 — Two significant comparisons from Extract A [4 marks]

Households with a water meter generally use less water than those without a meter, particularly in smaller households. For example, a one-person household uses 54 cubic metres with a meter compared to 66 cubic metres without one, showing metering reduces water usage.

However, in larger households the difference is smaller or reversed. For example, a five-person household uses 191 cubic metres with a meter compared to 182 cubic metres without one, suggesting metering may have less impact on water usage in larger households.

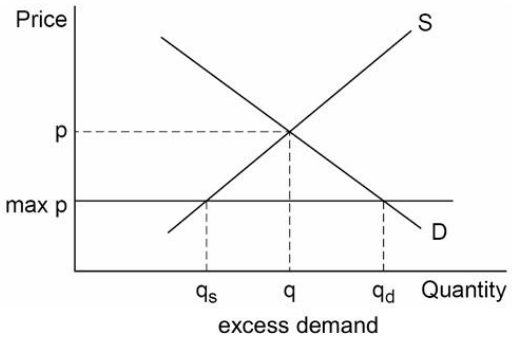
Q24 — Maximum price below equilibrium [4 marks]

2 4 ***Extract C*** *(line 20) states: 'Perhaps a maximum price should be set for water'.*

Draw a diagram to show the impact on the market for water of setting a maximum price below the equilibrium.

[4 marks]

The correct diagram involves a supply and demand diagram, illustrating an initial equilibrium point, a maximum price below equilibrium and some indication of excess demand, either by writing 'excess demand' in the appropriate place or by labelling the two coordinates for supply and demand at this new price (q_1 and q_2 would be acceptable, for example, instead or q_s and q_d).



Q25 — How firms in the water industry could compete (10 marks, chain-of-analysis)

Extract B (lines 13–14) states: 'Most water (and sewerage) services are not provided by competitive markets… Only businesses can choose their water supplier'.

Explain how firms in the water industry could compete to attract businesses or other customers.

[10 marks]

First point:
Extract B states that only businesses can choose their water supplier → firms compete to attract business customers → firms may lower prices → lower prices reduce business costs → businesses are more likely to switch supplier → firms gain greater market share.

Second point:
Firms can compete using non-price methods → this includes better customer service, faster response to leaks and reliable supply → businesses value reliability because water is essential → higher service quality increases customer satisfaction → customers are less likely to switch away → firms retain and attract more customers.

Third point:
Firms may offer environmentally sustainable water management → businesses increasingly value sustainability → this improves firm reputation → stronger brand image attracts more business customers → firms gain a competitive advantage without cutting prices.

Q26 — Assess whether all households should pay according to the amount of water they use (25 marks, chain-of-analysis)

Introduction:
Extract C states that when people pay according to the quantity of water used, they are less likely

to be wasteful. With water being a scarce but essential resource, the issue is whether charging households by usage through water meters is fair and effective for all consumers.

Point 1:
Paying according to usage encourages water conservation → Extract C states households with meters use 10% to 15% less water → higher marginal cost of extra water increases awareness of usage → consumers reduce wasteful behaviour such as long baths → water demand falls → this helps preserve a scarce resource → lower water usage also reduces energy use for heating water → consumers save money and environmental damage is reduced.

Evaluation of point 1:
However, not all households can easily reduce water usage → large families or households with medical needs may require more water → paying by usage increases bills for these households → this may be unfair, especially for low-income families → Extract C notes concerns that poorer households could end up paying more → making the system regressive.

Point 2:
Charging by usage improves economic efficiency → consumers pay closer to the marginal cost of water → resources are allocated more efficiently → water companies can better manage demand in areas of serious water stress (Extract C) → this reduces the need for costly new infrastructure such as reservoirs → leading to lower long-run costs for firms and consumers.

Evaluation of point 2:
However, water is a basic necessity → high prices may cause some households to reduce consumption below healthy levels → Extract C highlights potential health problems if water use is reduced too much → this suggests market-based pricing alone may not protect vulnerable consumers → supporting the case for fixed charges or price caps.

Conclusion:
Overall, paying according to water usage can reduce waste and improve efficiency, particularly in areas facing water stress. However, because water is a basic necessity, a fully usage-based system may be unfair for low-income or large households. A mixed pricing system, combining a basic allowance with usage-based charges, is likely to be the most effective and equitable solution.

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