Checking a Wet Gas Collection Model

Scoring guide · one credit per question · review written work against each rubric

Checking a Wet Gas Collection Model

Question 1

Nitrogen partial pressure is total minus water vapor pressure, 103.2 − 3.2 = 100.0 kPa.

Question 2

Choice (3)

The nitrogen pressure in the wet vessel is 100.0 kPa, matching the dry vessel. Equal partial pressures, volumes, and temperatures imply equal nitrogen amounts.

Question 3

The corrected nitrogen pressure and temperature are unchanged. The volume falls from 1.00 to 0.50 L, so the nitrogen amount is half as large.

Question 4

It would be too high because the pressure assigned to nitrogen would include the pressure from water vapor. At fixed volume and temperature, a higher assigned pressure gives a higher calculated nitrogen amount.