

① a) $134 \text{ g} / 100 \text{ g H}_2\text{O}$

b) $72 \text{ g} / 100 \text{ g H}_2\text{O}$

c) $101 \text{ g} / 100 \text{ g H}_2\text{O}$

d) $55 \text{ g} / 100 \text{ g H}_2\text{O}$

e) $40 \text{ g} / 100 \text{ g H}_2\text{O}$

f) $33 \text{ g} / 100 \text{ g H}_2\text{O}$

g) $59 \text{ g} / 100 \text{ g H}_2\text{O}$

h) $137 \text{ g} / 100 \text{ g H}_2\text{O}$

i) $23 \text{ g} / 100 \text{ g H}_2\text{O}$

② A $\frac{10 \text{ g}}{50 \text{ g}} = \frac{20 \text{ g}}{100 \text{ g}}$

B $\frac{20 \text{ g}}{60 \text{ g}} = \frac{33 \text{ g}}{100 \text{ g}}$

C $\frac{30 \text{ g}}{120 \text{ g}} = \frac{25 \text{ g}}{100 \text{ g}}$

D $\frac{40 \text{ g}}{80 \text{ g}} = \frac{50 \text{ g}}{100 \text{ g}}$

← most soluble

③ a) removing the cap decreases the pressure
decreasing the pressure decreases the solubility

b) the cola gets warmer
as the temp increases, the solubility decreases

④ a) KCl

b) solubility of KCl @ 60°C = $45\text{g} / 100\text{g H}_2\text{O}$

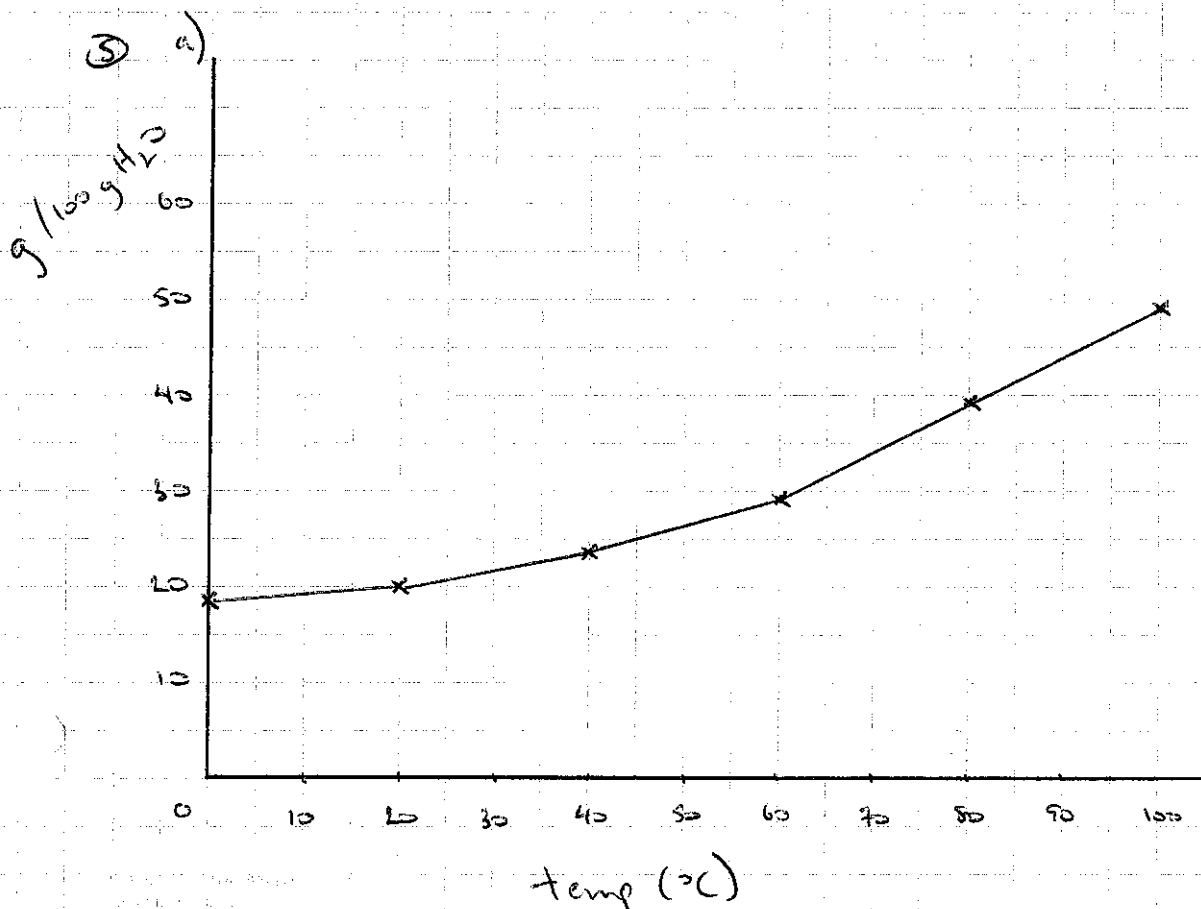
$$\frac{45\text{g}}{100\text{g}} = \frac{90\text{g}}{200\text{g}}$$

∴ it takes 90 g KCl to saturate

c) solubility of KCl @ 10°C = $30\text{g} / 100\text{g H}_2\text{O}$

$$\frac{30\text{g}}{100\text{g}} = \frac{60\text{g}}{200\text{g}}$$

$90 - 60 = 30\text{g}$ precipitated.



5) b) solubility @ 40°C = $24\text{ g} / 100\text{ g H}_2\text{O}$

) $24 - 15 = 9\text{ g}$ more can be dissolved

c) solubility of KClO_3 @ 10°C = $7\text{ g} / 100\text{ g H}_2\text{O}$

so 7 g must be dissolved.

6) solubility @ 60°C = $127\text{ g} / 100\text{ g H}_2\text{O}$

solubility @ 10°C = $80\text{ g} / 100\text{ g H}_2\text{O}$

$127 - 80 = 47\text{ g NaNO}_3$ precipitate

7) solubility @ 90°C = $10\text{ g} / 100\text{ g H}_2\text{O}$

so could contain $< 10\text{ g NH}_3$