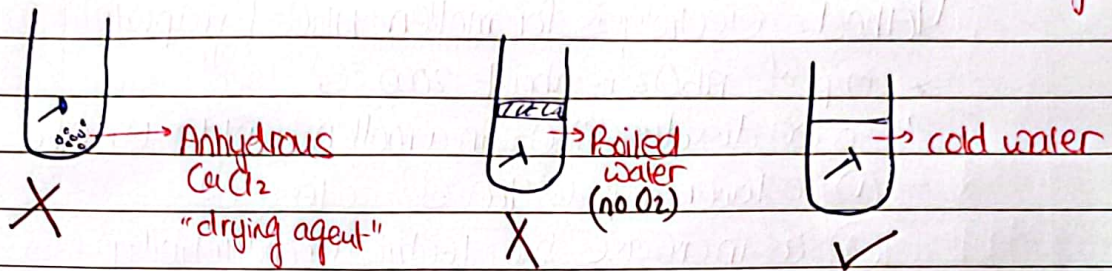


Rust: - reaction of iron with both  $O_2$  and  $H_2O$

slow reaction 6-7 days



- Plan an experiment to show which rust prevention solution is better.

- Take a known mass of iron nail.
- Apply a known volume of the 1<sup>st</sup> solution.
- Put them in a known volume of water.
- For 1 week
- Dry them and measure the mass again.
- Repeat the experiment with the 2<sup>nd</sup> solution.
- Conclusion: - the exp. which cause more increase in mass, worse sol.

- How to prevent rusting: -

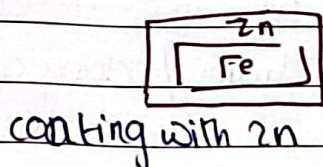
- ① Painting      ② Oiling      ③ Grasing

\* prevent  $O_2 + H_2O$  from reacting re iron

④ Cover with plastic.

⑤ Galvanizing

⑥ Sacrificial protection



$Zn + Mg \rightarrow$  more reactive than Fe

→ connecting to Zn Mg

→ more likely to oxidise

→ lose  $e^-$

→ so Fe is less likely to rust.